The Central Park.—No. 2.

IN our former article on the Central Park, we presented some objections to the crowded planting of the trees, and closed with the remark that we should have something more to say to the same purpose. We continue the subject now, while it is in season, with the hope of being able to offer some suggestions that may be both available and useful. We have also another object in view, and one which appeals to our native pride. Several parks are in progress elsewhere, and from year to year they will be springing up all over the country, some of which will no doubt rival our own in point of size, and, it may be, in natural beauty. Brooklyn has already proceeded in the matter; and before this number reaches our readers, Baltimore will have inaugurated a park almost equalling that of New York in dimensions, and which they purpose making the finest in the country. They will have the advantage of profiting by our success, and avoiding our errors; and from information received within a few days past, we are warranted in saying that the crowded planting and monotonous grouping, already alluded to, are among the errors which they will avoid from the very beginning; and if they do so, and the present system continues to be carried out at New York, our Baltimore friends ten years hence will have incomparably the best wooded park. This, and a recent conversation on the subject with some of the commissioners of a park in one of our eastern cities, give us reason to know that our remarks, brief as they were, have not been without their influence elsewhere, if not here.

So much has been said and predicted of the Central Park, that these cities will naturally look to it, in the first instance, as a model to study; this will be done with critical eyes, and we should therefore aim to make our park as perfect as may be both in its plan and execution, and with an eye to its future grandeur rather than present effect: if either is to be sacrificed, let it be the latter. We have a deep conviction that this is not being done in regard to that particular feature which gives character and grandeur to a park, and without which, indeed, there can be no such thing as a park.

We have already objected to the close planting of the trees, that there is no necessity for it, and that it is not in good taste. Let us say here, in order not to be misunderstood, that we do not object to an occasional clump of trees; such clumps may sometimes be introduced with the best effect; it is the ever-recurrence of these clumps that we consider an offence against good taste. It is so not only with the trees, but also with the shrubs. In the latter case, the design evidently has been to imitate the wildness of nature; but it has not been done, as a general thing, with the best success; the shrubs are so much crowded, without regard to their future growth and appearance, and put in with such mathematical formality, that the effect

has been greatly impaired, and an impression of almost painful stiffness is produced on the mind. This is what may be termed the German method, and we confess that it finds no favor with us; we do not like it, even in right-angled gardens, the only place where it should be tolerated, if tolerated at all. It is altogether out of place when brought into immediate contact with the tangled masses of a natural growth.

But this close planting is a positive injury to the trees; it not only impairs their form, and beauty, and individuality, but it retards their growth, and makes them tender; planting oaks two or three feet apart can only have the effect of dwarfing the monarch of the forest into a pigmy. It is well understood by professional men, (though not by the public,) that these trees are not intended to remain in this crowded condition; but we are fearful of the future. We know that some European landscape gardeners recommend thick planting, (but not so thick as we find at the park,) a portion of the trees being called "nursing" trees: a better name for them would be "robbers." In respect to those kinds that are hardy, these "nursing" trees are a pure fiction, in our climate at least, and we believe in all climates: we say this distinctly, without foregoing our conviction of the need of a certain degree of protection under given circumstances. The trees, under these conditions, make their chief growth from the top, and this of a weak and spindly nature, while the lower laterals also become weak and tender, or cease growing altogether, or die off, and the healthy formation of roots is correspondingly interrupted. This is now getting to be so well understood by our best nurserymen, that they are doubling and trebling the distance of their trees in the "nursery rows," and with the best results to the trees and their own pockets. Every consideration, therefore, of economy and æsthetics condemns this "gregarious" system of planting. We shall save time, and labor, and money, by giving the trees a little more room to grow in, and sooner have a park to be proud of and enjoy.

We ought to add here, that the groups more recently planted at the lower end of the park are much better disposed of, so far as space is concerned; and we accept this fact as an indication of better things to come. The probability of a forest of bare poles is somewhat lessened in consequence; for we have but a faint idea that these groups will ever be properly thinned, however firm the determination to do so may now be; if ever done, it will probably be by other hands, who have no proper conception of the effect intended to be produced by the original planting; and this is an additional reason for putting in now just as many trees as are wanted, and no more.

But we stop for the present. We shall have to indulge in a little more fault-finding on this subject, and after that we shall have some very pleasant things to say.

THE DELAWARE GRAPE AGAIN.

BY A. THOMSON, DELAWARE, OHIO.

This grape has for a number of years occupied a prominent position before the horticultural world, and its merits, probable origin, and various collateral questions have been very thoroughly discussed. It seems, however, there is still a difference of opinion as to whether it is a native or foreign variety.

That it is not *indigenous*, but an *exotic*, one gentleman at least has, during the last year or more, manifested unusual anxiety to show ; and if the most positive assertions to that effect, uttered in almost every imaginable form, are to be taken as conclusive, there is no room for further controversy. The gentleman referred to is my old friend and correspondent, WM. R. PRINCE, of Flushing, whose communication in your September issue demands some notice.

In that communication, as well as in his grape catalogue, in most of his recent advertisements, and in numerous letters that have come under my observation, he declares in most positive terms that it is clearly and unmistakably a foreign vine in all its characteristics ; and in one of his epistles declares that "no man of fair perception can be excused for the stupidity of classing it as a native." Nor is this all. He also denounces it as "one of the weakest foreign vines," and totally unsuited to exposed garden or field culture.

In regard to the nativity of the vine I am not prepared to speak in positive terms. It has always been my belief that it originated in the garden of Judge Provost ; probably a chance seedling, and not unlikely from seed of fruit from a foreign vine. This, however, is merely an opinion, and may or may not be correct. Knowing it to be perfectly hardy, as free from mildew as any variety with which I am acquainted, prolific, of healthy and vigorous habit, and the fruit of unsurpassed excellence, I have not regarded it a matter of consequence whether it is a native or foreign variety. I have never, I believe, asserted that it is beyond all doubt a native ; and if I have made declarations looking that way, they have been the result of evidence furnished by those in whose competency to express an authoritative opinion I have confidence. I think nine-tenths of those who have undertaken to classify it *botanically* have ranked it as a native ; and if they are masters of the science it must be a native, or the science is fallacious. On the evidence of gentlemen of this class I am willing to rest the question, and acquiesce in their decision. I will not attempt to collect the published testimony attainable, but will content myself with introducing two witnesses only, in the competency and judgment of both of whom I have great confidence. The *first* is a gentleman who occupies a conspicuous position before the horticultural public, and whose authority on questions such as this few would feel disposed to dispute. In a letter dated Jan. 18, 1859, he says :

"I have been a 'devotee' of botanical science for near twenty years, and *think* I can tell one *species* of grape from another. If the Delaware *is* of foreign origin, I shall have to believe botanical rules all 'nonsense.' There is *certainly* no foreign sap in its vessels."

The *next* witness I feel at liberty, under existing circumstances, to name. He is WILLIAM R. PRINCE ; and in a letter before me, dated Nov. 12, 1855, he thus expresses himself :

"Mark my words. I say your Delaware Grape is *not* a foreign variety. I don't say 'I don't think'—I say *I know the fact.* The Traminer is the 'Auvernas Rouge Claire' of Burgundy and the Rhine, and has been well known to me [W. R. P.] these twenty-five years. I once had several thousand vines of it."

This is a literal extract, *italicising* included. It certainly is pretty strong, coming as it does from a gentleman who now claims that it "has all the attributes of the foreign species, and does not possess one solitary attribute

of our native species ;" who is constantly quoted to prove that the Delaware is a foreign variety ; and who seems to coincide with the opinion expressed some fifteen years ago (not now) by "Germans in Ohio," that *it is* the Traminer.

A few words on the other branch of the subject. Mr. P. regards all who recommend the Delaware as adapted to exposed or vineyard culture as guilty of "gross fraud." In support of this theory he makes frequent reference to a visit he made to this place (Delaware, Ohio) in September last. In his article in your August issue, he says :

"I visited the town of Delaware, Ohio, last September, and, to my great surprise, I found but one Delaware vine in bearing, and that was trained against the south side of Mr. Campbell's stone house, and was so sheltered that any of the Chasselas grapes would mature their fruit in the same position."

The obvious intent of such language is to create the impression, as it in effect charges, that the Delaware does not succeed elsewhere than in the most sheltered positions. To undertake at this day to controvert an assertion like this would be decidedly a work of supererogation ; all fair experience, sustained by a "cloud of witnesses" in all sections of the country, refutes it. I am not prepared to speak of its success in "vineyard culture," as I have not seen it so tried ; but I do *know* that in this region of country (and a more trying locality, as regards variableness of climate, it is difficult to find anywhere) it *does succeed* admirably *in any situation where* ANY OTHER *grape will succeed ;* and my firm belief is, that a proper test will prove it to be most admirably adapted to "vineyard culture."

But Mr. P. "visited Delaware," and as I happen to know something of that visit, justice demands that I should refer to it. When here, Mr. P. had from one and a half to two hours at his disposal, and the day being a wet and disagreeable one, he visited but two gardens, Mr. Campbell's and my own. In Mr. Campbell's garden he saw *three* vines loaded with fruit, two of them on the south, the third on the west side of the house. In my garden he saw some thirty vines, embracing most of the hardy varieties in cultivation, but on *none* of them, except an Isabella and a Catawba trained against the east side of my brick dwelling-house, *did he see any fruit.* And *why not?* For the very good reason explained to him at the time, and since twice or thrice repeated, that the unprecedented frost of the fourth of June preceding had utterly destroyed not only all the fruit, (of which there was a large quantity set,) but also all the wood grown up to that time, not of the Delaware alone, but of Clinton, Concord, and *all* other vines not thoroughly protected. This is the reason Mr. P. found matters as he did ; and that he should attempt to present such a state of affairs to the prejudice of the Delaware, is to me matter of as "great surprise" as it possibly could have been to him that he "found but one Delaware vine in bearing." That he found no vines in bearing in my garden was simply because my Delaware vines were all layered, and I had none thus protected ; though it is a fact that I procured last fall Delaware grapes from more than a dozen different vines within the corporate limits.

I have this season a vine in my garden, all of which is layered except two branches. From the two branches I picked on the 20th of August, and sent to C. P. Bissell & Salter, Rochester, N. Y., thirty-six splendid clusters of fruit, leaving about the same number on the vine ; and from the layers

(which have grown from five to fifteen feet) picked, on the 7th of Sept. inst., about three pecks of well matured fruit. I know of no bearing vine, whatever its exposure, that is not fruiting this season; and the two original vines, planted nearly twenty years ago in open, exposed situations, are both still in vigorous health, and doubtless yielding their annual product of choice grapes.

Mr. P. speaks of "self-interest" in reference to those who defend the Delaware from his unjust aspersions. I am not a professional nurseryman, nor is vine-raising any part of my regular business, and my "self-interest" in the vine is not sufficient to warrant any great outlay of time in defending it; but I am impelled thereto by a love of justice and fair dealing, and from an interest I feel in its reputation, growing out of the fact that I had the honor of first introducing it to the notice of horticulturists. Mr. P., I think, must himself have a *motive* for his extraordinary course. I might *guess* what the motive is; but not being a Yankee, I will not exercise that privilege. I might, too, search for it amid the manifold springs that control human action, and as a reward for my labor be enabled to cry "*Eureka!*" and write down "*self-interest;*" but to do so would, to say the least, be ungenerous, and I forbear.

The Delaware is in the hands of the people; an intelligent and discriminating horticultural public will doubtless do it justice, and if it will not pass the ordeal of all fair tests unscathed, let it fall. All its friends desire or ask is, that it be treated justly and fairly.

[It is meet and proper that Mr. Thomson should come forward with a statement of the conditions under which the Delaware is growing at his own home and in his own locality. It is there that it has been longest cultivated, and it is there that we look for the strongest evidence of its fruitfulness and general hardiness. Its character in both these respects has been impeached, and we have been pointed to Delaware for the evidence. Mr. Thomson's silence, under these circumstances, has been regarded by some as a confirmation of all that has been said in disfavor of the Delaware grape; there are many, however, who have had abundant opportunities of testing its hardiness under a variety of circumstances, who regard such silence in a different light. We now have the facts on the other side as regards Delaware, and the public will be better able to form an impartial judgment. We think Mr. Prince has injured his own cause by the use of harsh language. If he would only for a moment reflect that he himself once considered the Delaware a native grape, he would have more charity for those who now entertain the same opinion that he once did; certainly he would not gravely charge them with "gross fraud" and being governed by "self-interest," because he must know them to be men of too much integrity to be open to any such imputation. There are men of undoubted honesty all over the country, in no way interested in the sale of vines, who believe the Delaware to be a native grape; and it is neither right nor proper to impeach their integrity because their convictions may not happen to agree with our own; it is not only illogical, but unfair. The proper way to convince an opponent, is to lay before him the evidence which brought conviction to our own minds; and before doing so we ought to be quite sure that the evidence we purpose presenting is of such a character as to carry with it the force of truth; certainly we can not hope to convince him by attempting to impeach his honesty, and in

the attempt we are very apt to betray our own weakness. These remarks are of a general nature, and intended to apply to this or any other subject in dispute. There are certain facts connected with the Delaware grape, and these we want: it mildews more or less than other kinds; it is more or less productive; it is more or less hardy under given conditions of location; it is more or less robust in its habit; it has certain qualities of goodness as compared with other varieties; it has a history in reference to its origin; it has certain natural characteristics which serve to determine its place among native or foreign vines; these and similar facts, well ascertained and fairly presented, will bring conviction to all candid minds; others would not be convinced "though one rose from the dead."—Ed.]

LANDSCAPE ENGINEERING.—No. V.

BY GEO. E. WOODWARD,

Civil and Landscape Engineer, 29 Broadway, ew York.

It may be a matter of surprise to many to learn how intimately the arts of design are united with those of construction, or rather the great use made of a draftsman's skill in developing a work of art, exhibiting its effect, and conveying to the most practical mind its most simple form of production. In architecture, machinery, etc., this is admitted, because the general education of popular taste enables us to understand how we can execute an idea on paper, and carry out a practical result in accordance with it; but when we come to a more intricate form of construction, and more particularly that which relates to landscape adornment, we fail, as a general thing, to recognize any principle of design on paper as applicable to the tasteful results we would like to produce. There evidently is a want of knowledge of the manner in which positive results are attainable in the various departments of art. We are too apt to suppose that there is but the one step from conception to execution; that the brain originates, cherishes, and perfects an idea which the same skilful hand at once executes, while in reality we overlook the intermediate links, which step by step lead on from the first original thought to the perfect result—a result as finished and thorough in model or plan as in the final execution. Effects, position, color, form, etc., are all studied in advance, individually and collectively, the details arranged, and the impracticabilities discarded. And where a superior mind is to fix its impress, it has then the ability to direct the execution by inferior minds and hands of the artistic work it has perfected. The artist can convey his plan and his thoughts to others, to execute those mechanical details which belong to every work of art, and which carry it forward to receive those Michael Angelo trifles which make up that "perfection which is no trifle."

In no department of the refined and cultivated arts, and more particularly in the arts of construction, do we see the principles of design so completely ignored as in that of landscape gardening; it is perhaps in this country one of the most experimental of all the arts, and consequently one of the most expensive.

That we all have, or think we have, an intuitive idea how a country place should be laid out, can not but be generally admitted, and with the supreme

folly of supposing that every one's taste, whether professional, amateur, or otherwise, is wretched bad taste unless it coincides exactly with our own. There are so many ways of beautifying a landscape, each of which shall be entirely unlike the other, and comprise the same amount of good taste, that it is surprising why those of little or no taste seek to fortify themselves by condemning the taste of others. There are some, however, who are not shrewd enough to conceal all their weak points, even when they are not able to comprehend why landscape work in the process of construction differs so completely from the finished effects of the original design.

Perhaps there is no department of art that so much requires the aid of those principles that facilitate the comprehension and execution of work as that of landscape gardening, nor is there any art to which a system of working drawings is more thoroughly applicable. As a matter of economy and taste, it is more satisfactory to experiment with a pencil than with real objects; it is better to work out your plan on paper, accept or reject your gratuitous criticisms, study well your chess-board series of combinations, and then execute with a thorough understanding of the result. In no other manner can excellence be reached; we must know effects, beauties, cost, etc., in advance; and improvements of every class can just as well be studied in the abstract, and the plans for their execution be as thoroughly perfected for any form of landscape adornment, as they can be for any form that is cut from marble or delineated on canvas. There should be adopted an intelligent mode of conveying impressions from the mind that originates, to the hand that constructs; and this medium between the artist and the mechanic or laboring man must be an expression of a well-studied plan, free from all mechanical impracticabilities, and so plain as not to admit of a misunderstanding.

The range of art is so extensive, and its applications so varied and beautiful, as to leave no question unanswered in this triumph of mind over matter. And those who wish to attain the direct road to success, combined with the minimum of expenditure, will do well to investigate its principles.

IOWA PRAIRIE SKETCHES.—No. V.

BY "MINNIE."

The principal genera of flowers appearing in Iowa, from the middle of May till the last of August, are the following: Potentilla and Oxalis, common in the Eastern states, but more abundant here; and their bright little faces are welcomed by the emigrant from Atlantic states, as early friends.

Ceanothus Americanus, common name Red-Root, which I understand grows east of the Alleghany Mountains, but was to me a stranger, is a small shrub, bearing crowded panicles of small white flowers, springing from the axis of the upper leaves. It is very abundant, quite pretty, and on a bright dewy morning recommends itself to our olfactories by its fragrance. It is a hardy perennial; and I am inclined to invite, or rather encourage its growth around our dwelling as an ornamental shrub. I have never seen it more than from one to two feet high, but think it will attain a much greater height when protected from the annual fires which sweep over the prairie; and in a cold, bleak climate like this, where rare shrubbery is liable to win-

ter-kill, it seems especially important to cultivate and improve our own natives, many of which, with half the care bestowed upon foreign plants, will no doubt rival them in loveliness. The Ceanothus is not, however, looked upon with much favor by the farmer, on account of its many thick stout roots, which break his plow-shares, and render it exceedingly difficult to till the *new* soil.

Aquilegia Canadensis, with its nodding head of chrome yellow petals, and bright crimson spurs, although possessing poisonous properties, as do all the Ranunculaceæ, would make a lively and graceful ornament to the parterre.

Baptisia leucophea, bearing long racemes of pale straw-colored papilionaceous flowers, is an ornament to the lawn or the prairie.

B. leucantha, coming several weeks later, is much more ragged in appearance ; rather a disgrace to its pretty sister.

Asclepias obtusifolia, A. pauperculia, and A. tuberosa, the latter of which is gayly colored, very showy, and a great bloomer.

Coreopsis triptera, abundant, but not attractive.

Organum majorana, Picnanthemum lanceolatum, and several other *labiates*, are here, which, as Hugh Miller says, "though *unfashionable* even in the days of Shenstone, who calls them plants of grey renown, still have their PRODUCTS *favorably received in the very best society*," and "which appear to have been specially created for the gratification of human sense."

The Rosaceæ, too, we have ; a "great family of plants," as Miller says, "of the very first importance to our race ; created late in the tertiary ages, only a short time previous to the appearance of *man* upon the earth." From this great natural order we are furnished with the important genera, Prunus, giving us two or three species of wild plum, one of which, even in its wild state, is really a delicious fruit ; Cerasus serotina, a very fine species of wild cherry ; Pyrus, with its crab-apple, not pleasant to eat it is true, except when preserved, but a beautiful tree, lovely in its bloom and fragrance ; Rubus, with its delicious blackberry and raspberry ; Fragaria, with several varieties of strawberry ; Rosa, with its beautiful wild prairie roses, which decorate our landscape for two or three months in summer with their lovely flowers, and in autumn with their bright red seed-cups ; and the Euphorbia corolata, blooming from May to September, very delicate, and the umbels becoming more forked, and flowering more profusely, by cultivation. No bouquet of wild summer flowers is complete without having this added as a finish.

Cassia chamæchrista, flower yellow, with dark brown centre, leaves pinnate and quite sensitive, height twelve to eighteen inches. It should find a place in every flower-garden.

Gentiana crinita, beautiful. Œnothera parviflora, and another, probably a *variety* of fruticosa, with pubescence soft as the finest silk velvet covering stem and leaves.

Petalostemum candidum, and P. violaceum, both species of which are abundant on the prairie, and wholly *Western ;* growth from one to one foot and a half high ; the head somewhat resembling clover, but longer, and not so thick ; foliage delicate ; whole plant pretty ; one species is white, the other a lively violet purple ; continues in blow through July and August.

Physalis viscosa, with fruit somewhat resembling small tomatoes.

Lilium, one species more like the Philadelphicum than any other described, yet not wholly agreeing with it.

One Iris, two Cypripediums; Achillea millefolium; Echinacea angustifolia, rough and ugly; and Sylphium laciniatum.

Echinocystis lobata, a climbing plant, with branched tendrils and inflated fruit vessels; has small white flowers, very numerous, in axillary racemes, sometimes a foot long, and always turning toward the sun; bears cultivation; would probably be improved by it; is a fine twining annual for a lattice.

Dysodia chrysanthemoides is abundant along old Indian trails, and wherever a beaten track or road is made. When crushed by the passing wheels it sends forth a perfume much like wild chamomile, (Anthemis cotula, which also grows here in abundance,) only much stronger, and in warm days the atmosphere becomes so freighted with it that one feels oppressed and faint from its inhalation.

My list is becoming long, and I fear tedious, so I will enumerate no more at present.

Yes, Mr. Editor, you shall have, at some future time, *seeds* of these my favorites; and hope you will admire them no less than I do, although you are surrounded by the cultivated flora of Eastern gardens and greenhouses, while *I* have, as yet, few other than these, the spontaneous growth of our prairies, in all their native wildness, and, of course, most fully *appreciate* their beauties.

[We shall be greatly delighted to have the promised seed; they shall have a choice place.—Ed.]

REVIEW OF THE GRAPE QUESTION.

BY A. S. FULLER.

(*Continued from page* 473.)

"Both Sides of the Grape Question" is the title of the second volume mentioned, and it might well be called *all sides* of the grape question, as all sides are treated of, but none definitely.

The volume contains three distinct essays by different authors. The author of the first essay, Mr. Saunders, being a practical gardener, does not attempt to give any new theories, or condemn any of the old and well-established principles upon which vines have been so long and successfully grown by skilful cultivators. Only a few of the most simple methods of training and pruning are treated of; and we have to regret that the author does not give some more definite and distinct rules for these, as it is generally admitted among vine-growers that the different varieties or classes are susceptible of widely different methods, and the one that is peculiarly adapted to one class is worthless, or nearly so, for another. For example, the Thomery mode, which for some kinds may be termed the perfection of all systems, is only adapted to a few varieties. Only those that will produce fruit from the base or lower bud can be grown on this plan successfully. Many of our native varieties, if pruned to the lower bud, produce only wood shoots instead of fruit, although this may be partially remedied by severe root pruning and summer pinching; but it requires a skilful hand to perform this operation judiciously.

The author's remarks on the propagation of our native grapes from single eyes, and that they will make better plants the first season (if properly grown) than plants of two years' growth as generally grown from cuttings, are very true, and worthy of consideration. We are well aware that many will still assert that the long cutting grown in the open air is the best, although facts prove the contrary. A heavy soaking once a week in the absence of rain, as recommended by Mr. Saunders, will not always keep them vigorous, and great care is needed in watering; and it is only those plants that are making a vigorous growth and have a good drainage that can sustain a "soaking" with water; and it may be observed that newly planted vines are oftener killed by profuse watering than by any other means. Little rootlets, that shoot out into water or very damp soil, find an uncongenial element, and consequently die.

The operation of grafting the vine, as he remarks, although exceedingly simple, generally fails in the open air, even when skilfully performed, except at the South, where the operation is not so hazardous. Mr. Saunders's remarks upon this subject, although true when understood, are calculated to mislead. There is much care needed in using vines propagated in this way. They have much strength, to be sure, but are very uncertain. We much prefer plants grown from single eyes, as they are generally much better and more likely to succeed. No more of the parent plant should be used in propagating than is absolutely necessary, the end desired being to create an entirely new and healthy organization, with all the good qualities of the parent, but with none of its defects. To accomplish this, we know of no better way than to grow vines from single eyes.

Mr. Saunders's remarks upon preparing the soil, planting, and the proper age and size of plants, are particularly good; but allowing every leaf and lateral to grow undisturbed the first season, to encourage and secure a healthy root, as he recommends, is, in our opinion, far from being orthodox, and we think but few of our scientific grape-growers will agree with him on this point. If laterals are taken out early, nothing is lost, and one good leaf on the main shoot is worth more than many on the laterals, for giving strength and constitution to the plant, and more particularly for ripening the wood and roots to enable them to endure the winter without damage.

In regard to flavor or excellence of fruit, we think no one who has enjoyed good grapes will agree with Mr. Saunders. He has evidently *not perceived* the true excellence, for his remarks betray no knowledge or appreciation of the satisfaction that springs from the enjoyment of rich vinous grapes like the Grizzly Frontignan, Muscat of Alexandria, or our own Diana, Delaware, Lenoir, and several others of like quality.

We can not better illustrate the real merits of some of our old favorites when compared with some of the new ones, or the increasing desire to possess something better than Isabella or Concord, than by quoting from a letter which we received from a lady who had read Mr. Saunders's remarks upon the relative merits of the different grapes mentioned in his work. She says: "He talks as if he were speaking of the products of the vegetable garden, and did not know the *meaning of fruit*, never having been inspired by its enjoyments. Isabella, sweet, tame, but good enough for want of any thing better, only its skin smarts the mouth too much, and its juice leaves no pleasant sensation of refreshment. Concord, still more so, or, in Mr. Saunders's words, 'luscious and buttery,' like a poor plum, with a good deal

of the offensiveness of the fox added. It palls instead of growing upon the taste, and has no vitality. Diana, sweet, refreshing, with largeness of soul. Delaware, all life and spirit, always making the partaker more happy, and better. To these latter we recur as to dear friends who always do us good, and whose memory is a blessing. To the others we recur with kindness indeed, but with pity for their defects."

The *Second* Essay is by F. J. Cope. He begins by asserting broadly that "our whole system of fruit culture is based upon incorrect principles," and which, of course, he at once puts into nothingness, but with such a dazzling blaze of *fine writing* that in our blinded bewilderment we were only conscious of the wish that scores of tender Misses with uninked albums might be present at his next inspiration, each to catch a glowing line of his effusions! Unlike the classic historian Knickerbocker, he goes back to creation only to begin, and then he trusts but little to what is recorded in sacred writ, profane history, or fairy legend, regarding them only with a contemptuous nod, but relies firmly upon his own vast intuition and teachings of his mother Nature, whose lessons he seems to have sadly misunderstood.

The *Third* Essay is by J. M. McMinn. This attempt to classify the different varieties and species of the vine of the eastern and western hemispheres calls for but a passing notice; for the man who will tell us that the Herbemont and Norton's Virginia are esteemed the *very best* grapes in New York, certainly ought to travel before he attempts to instruct the people. One who will tell us that there are over one hundred and fifty *species* of the grape in a land where botanists have discovered but one, will certainly never mislead any one, however ignorant.

We hope, for the sake of the good reputation of all practical gardeners, among which we are happy to class Mr. Saunders, that he will revise his part of "Both Sides of the Grape Question," discard *foreign* matter, and give us a *practical work*, which we believe, from the good sense contained in the present volume, he is capable of doing.

THE NEGLEY PEAR AGAIN.

BY JAMES S. NEGLEY, PITTSBURGH, PA.

In the June number of the HORTICULTURIST, Mr. Heaver, of Cincinnati, questioned my statements relative to the Negley Pear, in a manner which did not admit of a reply, except by positive contradiction. This I declined to do, preferring to embrace some more courteous opportunity of vindicating the merits of the pear than by disputing with a gentleman who has extended to me many acts of kindness. I now only refer to the subject out of respect for my aged and highly esteemed friend, Jacob Boyer, Esq., who has sent me a communication, and desires it published. I hope you may find it convenient to publish his letter, if only as an inducement to him to continue his contributions on the early fruits of the Alleghany and Ohio valley. I also cut out from page 13, in the *Transactions of the Ohio Pomological Society*, the following notice of the Negley Pear:

"A PEAR FROM PITTSBURGH, without name, presented by Mr. Negley, has been cultivated for fifty or sixty years in that vicinity, and was never known to blight, while trees of nearly all other kinds have been greatly damaged by

that disease. Fruit closely resembles Flemish Beauty, but is not that variety, nor quite equal to it in quality. Has never been able to identify it with any known variety, and, from all he can learn of its history, has no doubt of its being a seedling. From its remarkable hardiness of tree, productiveness, and excellence of fruit, he regarded it as a highly valuable variety, and would suggest that the society give it a name.

"The Society concurred in recommending it as deserving of trial."

Mr. Heaver will remember of being present with me on the sub-fruit committee. I would send you a copy of his remarks from my note book, but as he has forgotten them, I shall not repeat them. Messrs. Ernst, M. B. Bateham, J. C. Teas, and others present, expressed a strong desire to obtain scions for experiment. I sent them the coming spring. Mr. Teas, of Indiana, a gentleman of extensive experience in pomology, writes me that his grafts would have borne fruit this spring but for an untimely frost. I would send you a copy of the committee's report, which friend Heaver says classed it only second quality; but I do not find it published in the transactions of the Cincinnati Horticultural Society; perhaps the printer kindly left it out. In thankfulness to the Editor of the HORTICULTURIST for the unsolicited "extensive prominence" given to the Negley Pear, I have sent you a few specimens of second size, and sincerely hope that you will not be "most egregiously disappointed." As I was one of the purchasers of the Peabody Strawberry, I beg not to be reminded of it, especially as I never advertised trees of the Negley Pear for sale. I do not claim it as my seedling; requested no one to name it after me; did not publish a colored plate of it; did not publish a description of it in the HORTICULTURIST, until kindly requested by the Editor; because I have sent specimens all over the country for the past four years, and could get two hundred of my neighbors to certify to the excellence of the pear, and to the truth of my statements; further, I am perfectly indifferent whether it suits the taste of our Cincinnati friend or not, as the demand for such pears in the Pittsburgh market can not be supplied.

[The following is the letter referred to by Mr. Negley.—ED.]

SNOWDENTOWN, August 13, 1860.

Friend Negley:—I was somewhat surprised in reading over the strictures of Mr. Heaver, of Cincinnati, contained in the June number of the HORTICULTURIST, which I think were altogether uncalled for; the spirit and temper of the article not savoring of the good and kindly feeling that should always exist among fruit-growers, the oldest as well as the most honorable of all callings. It is the narrow-minded that whisper innuendoes, and without reflection condemn a thing before they know what it is.

But to the point in which my colleagues and myself are placed. In the autumn of 1856, (if I mistake not,) Richard J. Knox, Dr. Addison, and myself were called upon to act as judges in the fruit department; the Pear now in question was on exhibition, with a very general selection of pears. It was then for the first time seen and tasted by the committee; and as it drew the attention of the committee, and I think every other person in the hall, a number of fruit raisers, gentlemen who had been to various points at fruit exhibitions, all, with one voice, pronounced it the handsomest pear they had ever seen, visitors, men, women, and children, all stopping to see the pears, and with one voice pronouncing it the beau ideal of all pears they had ever beheld. The committee were very frequently asked if it was as well-tasted as

the appearance indicated. To satisfy ourselves and the public, quite a number were cut and distributed, all agreeing that the flavor was very superior. As they were not entered on the list for competition, the committee suggested the name which it now bears, with a discretionary premium awarded, and recommended it for further notice and trial. We had not the Cumberland Pear on exhibition, therefore could not compare it; it stood alone, and far surpassing in appearance the engraving in the May number of the HORTICULTURIST, being, I think, more like the Frederic of Wurtemburg, in Downing's large work on fruit. Thus far I have spoken of the appearance and flavor of the pear in question; but its bearing properties I know nothing about, only as was stated by the uncle who now owns the tree; but have no doubt of its productiveness, from the fact of having seen them in profusion at every horticultural exhibition since 1856.

I am averse to making myself conspicuous in any public journal, but as a friend I could not see a friend's motives impeached. I feel satisfied that you never forced either the fruit or name upon the public. I honestly believe the pear in question to be all you represent it, and as such, though old, will, if spared, plant a few trees for my own use and market, thinking it a great acquisition to our pear list; and all honor as well as profit should belong to you and old Alleghany county. It may not prove to be so fine in other soils or localities, but let it rise or sink on its own merits.

Yours, as ever, in truth,

J. BOYER.

GENL. J. S. NEGLEY.

[At the time we published Mr. Heaver's article, we requested Mr. Negley to send us specimens of the Negley Pear. This he did about three weeks since; but they were addressed to Mr. Saxton, and sent to his house. On discovering what they were, however, he brought us a specimen, which was at least three times the size of the figure in our June number, and a very beautiful object to look at; but on cutting it it proved to be very wormy and imperfect, and no fair opinion could be formed of its quality. We regret that this should have happened, as we felt a strong desire to see the pear in its perfection, after all that has been said about it.—ED.]

WILD DELAWARE GRAPES.

BY A BUFFALONIAN.

I DISCOVERED, Mr. Editor, upon opening your September number, that my incidental remarks upon this subject had really waked up "the opposing party," in the persons of both Dr. Garber and Mr. Prince.

I *had* seen a paragraph contradicting the statement to which I alluded, but did not understand it to be authoritative, not being aware that a committee had investigated the point.

The undoubted authority of Dr. Garber establishes the fact that the grape was *not* "found in a wild state" in the localities *visited by him*, but I do not see that the impossibility of its having originated *somewhere* in the country is thereby conclusively proved.

I have no sort of interest in proving the American origin of this fruit, beyond the natural desire that we should be able to claim as many good things

as possible, as belonging to the country. The Delaware being pretty well established as a *very* good thing, and as hardy as can reasonably be expected, I do not see that its origin is of any especial importance; still I should like to see its pedigree *clearly* and *distinctly* traced, even if it should lead to the vineyard of Judge Provost, of Frenchtown, and to an imported vine.

I hope that Dr. Garber, who is undoubtedly competent to the undertaking, will write up the history of the variety, and bring out all the facts in point, from its importation, if it *was* imported, and from the seed, if it *wasn't*. Why does Mr. Prince wait for "another fruiting season" before bringing up *his* battery? Better for him to tell us what he knows *now*, and thereby assist "the public at large" in the "investigation," and afterwards produce any new evidence that may be elicited. I have heard Mr. Prince, more than once, expatiate upon "the land of the grape and the home of the vine," and the numerous varieties therein originating, and have no doubt that his version of the case would be quite convincing.

My own idea of the subject is, that the Delaware is not a native grape in the strictest sense, but a hybrid between native and foreign varieties, combining, as it does, the many good qualities of the latter with the hardiness of the former.

I had the pleasure, a few days since, of comparing the Delaware and Ontario, the latter, however, not fully ripe, but well colored. Its size, both of bunch and berry, was the only point of superiority that I discovered in comparison with the Isabella; but the Delaware was exceedingly fine. A cross between the two, which should produce a hardy variety with the size and beauty of the Ontario, and the excellence in other respects of the Delaware, would leave little to be desired in native grapes; and that such a variety will be produced can scarcely be doubted, when we reflect upon the astonishing number and the great excellence of the native sorts, both of grapes and other fruits, that we already possess, and the comparatively very few that were known twenty years since.

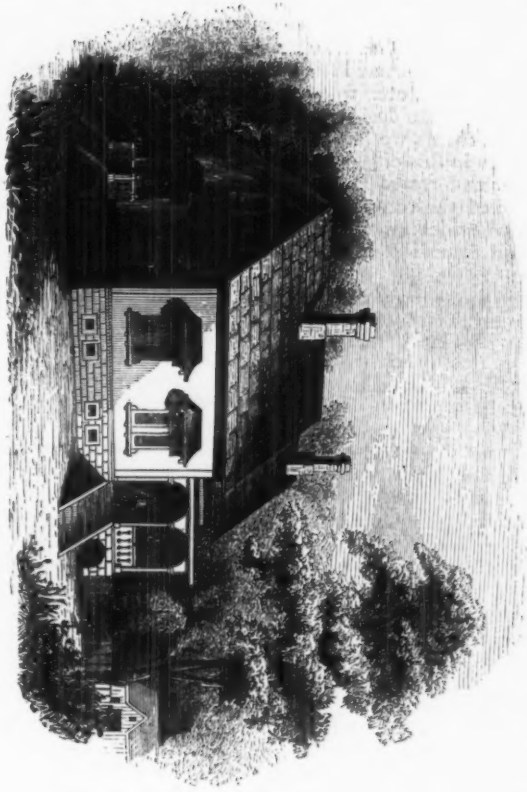
As to Dr. Garber's threat of "repeating the dose," I should have no objection to his dosing me with Delaware *grapes, ad libitum;* the discussion of the subject on paper being somewhat less juicy, I shall not give him the same liberty, if he prefers that mode, but reserve the privilege of crying "enough," if I see occasion.

DESIGNS IN RURAL ARCHITECTURE.—No. VII.

A NEW ENGLAND VILLAGE RESIDENCE.

BY GEO. E. HARNEY, LYNN, MASS.

THERE is a style of building which seems to be peculiar to New England, or, at least, which seems to have been more generally adopted here than in the other States; for one can hardly pass through a thrifty New England village without remarking the prevalence of those plain one story and a half "end to the street" cottages, standing a rod or two back from the highway, and approached by a straight, narrow path, bordered with box and shaded by a row of cherry-trees, while at the side are the kitchen and flower gardens, another path leading to the back door, and another row of cherry-trees to shade it.

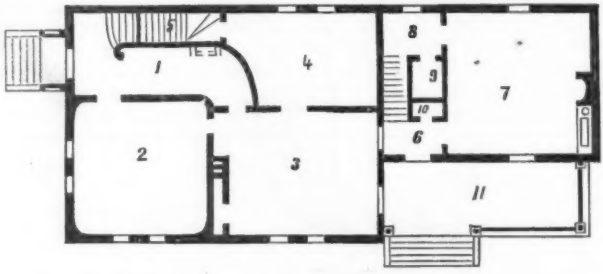


A NEW ENGLAND VILLAGE RESIDENCE.

These cottages, too, are invariably painted white—pure, unadulterated white—with the brightest of green blinds, and the reddest of chimneys, and the whitest of front doors; though there is one village that we now have in mind where all the front doors are painted white, with red and yellow panels by way of variety; but this, of course, is not general.

True, these dwellings many of them have an air of neatness which is really proverbial, and which in itself is very good; yet we do not consider them pleasing objects in a landscape; they are too bright—too obtrusive. Far prettier would they look if the color even were changed, and some modest neutral tint substituted for the glaring white; and far prettier still would they appear if some little ornament in the way of window and door trimmings, verandas, etc., were added.

With regard to the design on the accompanying page, it was originally just such a house as we have been describing, a perfect *fac simile* of hundreds of others in this city—very plain, very white, very neat. When called upon to alter and remodel it, we added the boldly projecting window and door hoods and the veranda, and introduced a few other ornamental details where needed, which serve to relieve it of its former bareness, and give it a better architectural character.



The perspective view shows the appearance of the exterior. The plan of the interior gives the following rooms: No. 1, hall, seven feet six inches by sixteen feet four inches; No. 2, parlor, twelve feet six inches by thirteen feet, opening into the dining-room, No. 3, twelve feet by sixteen. No. 4 is a bedroom opening directly from No. 3. There is a large closet under the front stairs at No. 5. No. 6 is a back entry, three feet six inches by six feet six inches. No. 7 is the kitchen, thirteen feet by fourteen. No. 8 is a good-sized pantry, communicating with the cellar by stairs under the back chamber stairs. No. 9 is a large store closet, fitted with shelves and drawers. No. 10 is a hat and coat closet, opening from the entry. No. 11 is the piazza.

The second floor is divided in the same manner as the first, having five chambers, a clothes-press, and a bathing-room.

The height of the first story is ten feet, and the second nine feet six inches.

Such a house as this may be built complete, including painting—three coats inside and two outside—for about eighteen hundred dollars.

EXPERIENCE *versus* THEORY.

BY JOHN ELLIS, FOX MEADOW GARDENS, N. Y.

Mr. Editor :—We have no desire to annihilate Mr. Eaton, nor any other gentleman, especially one who has the power and faculty of contributing one jot or tittle to the great cause of Horticulture.

In discussing any matter or topic in this journal, we have nothing to do with personalities, or individual, personal, good or bad qualifications, and I am always sorry when writers so much forget themselves as to fall into this great error.

Mr. Eaton has not fallen under our *great displeasure;* the only thing he seems to have fallen into is a *great mistake,* and this is nothing more than all humanity is liable to. Do not let us mistake a man's experience, his practice, his system of doing things, for the individual man, because it is the former *we have to do with,* and the latter, *nothing.*

Do not let us be misunderstood on this point. We have nothing to do with Mr. Eaton ; but we have to do with his works, his practice, his experience, and his theory. So from this time out, Mr. Eaton, let us say less of self, less of that which flows from the back of the head, where the animal seems to reign triumphant, and cultivate more of that which dwells, or ought to dwell, in the front and upper region of this same brain. It will have a much better influence on the minds of those readers who are, perhaps, younger than you or I, and a more salutary influence on the spirit of the horticultural profession generally.

Now, friend Eaton, let us reason together. In your reply of last month you say, "but still it is a slight comfort to be informed that I have no particular objection to your plan," etc. Why did you not, as an honest man, finish out that sentence, and not stop short just at a place in the sentence where it suited your own convenience ? You may as well have given the whole of it, for be assured those interested in this question will be sure to read it, and read it very carefully too. The remaining portion of the sentence that you wilfully left out, reads thus : "Still, to commercial growers, who, from necessity, ought to obtain the very perfection of fruit, I should by no means recommend it." Now you see, friend Eaton, this sentence, read consecutively as it stands in print, really means just what I intended it to mean, and not that which *you* would have it understood to mean. The exception I made to this (in my opinion) badly-arranged plan was, where a gentleman may fancy a whim, or hobby-horse, and has plenty of money that is his own, why of course he has a right to carry out any hobby he pleases. It was, and is, distinctly stated, that in this case I had no particular objection to this so-called plan ; but in every other case, great objections. You say, "I will endeavor to show that I am not so entirely wrong in every particular as he endeavors to prove."

I have studied your answer very carefully in every particular *in question,* but honestly I do not see that you have shown or substantiated any one point in connection with the right or wrong of your plan. The only thing you have *distinctly* shown is, how to ask a lot of questions : wanting to know what kind of *sheds* I grow grapes in ; whether I grow vines on the back walls or not ; if the wood ripens on the back-wall vines ; and have I *ever, ever, ever* grown grapes or vines in a span-roofed or curvilinear house.

Now what on earth has all this nonsense to do with the question at issue? Suppose I *never, never, never* grew a grape in my life, or that I *never, never* saw a vine, and could show you by sound common sense and reasoning that the plan you proposed for a man to get his living by in growing forced grapes for market was a miserably poor one; would that invalidate my suggestions if they were truthful and correct? This plan is intended for the man who knows not how to build; the man who knows not whether a house should stand east, west, north, or south; whether it is best to have all glass, or half glass, bricks, and mortar; whether for money making, or profitable and advantageous, it is better to have his glass houses *all above* ground, or *half under* ground; which of these arrangements will take less fuel, and in the end cost less. Plans are not intended for those that understand this business, but for those that know comparatively nothing about it.

The man who understands this subject does not require either your advice or mine, so that your plan is, *in reality*, got up for the novice; and it is *your bounden duty* to tell him *where*, and *in what* are the "many advantages that more than counterbalance" even houses erected on the old lean-to shed principle.

Here comes this novice with a few hundred dollars in his hand; he has been informed that growing forced grapes for market is a good, profitable business (poor fellow!); he wishes to launch this hard-earned money in the speculation; he knows not how to build; he is told that the earlier he can get his fruit into the market, the higher is the price. How shall I build? asks he. Which is the best plan? Now for this man Mr. Eaton proposes a plan which we were naughty enough to call the "*cross-stick.*" On this plan the early forcing-house is placed at the north. This said man wants to know if that (*north*) is the *best position* for said *early house*, and if so, why? and if a flow and return pipe in a house twenty feet wide, *twenty feet high*, and forty feet long, with glass on all sides, will radiate heat sufficient to have a crop of grapes ripen *early in June?* being given to understand that the said crop takes *nearly* six months to fully mature, consequently would have to commence forcing said house *early in December.* Further, said man wishes to know, previous to erecting this plan, what possible means there are of *retarding* the house marked D more than that of C. Said man wants to know, as C and D face the south, what on earth there is to prevent these two houses breaking together? and also where is the *pecuniary* advantage of having this succession? admitting the *possibility* of having a succession.

Let us see what Mr. Eaton says himself on this point, after giving us the plan in question. It must be remembered that we said, that "in curvilinear houses we invariably find the fruit better on one side than the other." Mr. Eaton says, this is true of houses placed on an "east and west line." Now it so happens that just half the plan in question stands on this line; consequently *one half* the fruit on this line must be inferior to the other. What is this man we have been speaking of to do with this inferior fruit? Will it fetch as much money as the other? Common sense says, No.

But there is one point in Mr. Eaton's remarks that I had almost forgotten to give him *credit for*, and had I omitted it, it certainly would have been very wrong. It is in reference to the vines planted on the *north* sides of the east and west line: he says, "for if it is an object to force grapes at all, the difference of *fifteen to twenty days* in time of ripening between the

Chasselas, etc., and the Hamburghs, is essentially worth something, even to a 'commercial man.'" Ho! Mr. Eaton! When a man speaks before the public, *faith it is printed.* What is *printed* for you on this point already, in the April number of this journal? It reads thus: "If it be desirable that the time of ripening should be nearly *equalized through the whole house.* it is not difficult to select *earlier sorts* for the *northerly sides*, which will *naturally be retarded until their maturity nearly corresponds with those in fruit.*"

Now, friend Eaton, which of these two stories will you have us believe—the *first*, or the *second?* Will these self-same vines be *naturally* retarded on the *north sides* of the house, as you would have us believe in the *first* statement? or, will they be ahead of the Hamburghs fifteen or twenty days, as you would have us believe in your *second* statement? Which ever of these *two statements* will suit you best just now under present circumstances, we will accept.

My dear sir, this discrepancy is too glaring. When you tell us these vines will be *naturally* retarded on the north sides, we certainly believe you; but admitting, for the sake of reasoning, that these Chasselas varieties are ripe some fifteen to twenty days before Hamburghs, and admitting all that we can in your favor, will they *weigh* as much in the *scales?* What amount is it in dollars and cents in a man's pocket, to have a bunch of "Early Sweetwaters, Frontignan, or Muscat Blanc Hative," some few days before Hamburghs and Muscats? Will the former named varieties (early forced) weigh half a pound a bunch, when the Hamburghs, under the same conditions, will weigh a pound? If they will not, *where is the pay?* Every man that has ever grown and *weighed* grapes, knows they will not. Now if these early sorts do not come in fifteen or twenty days before the Hamburghs, but come in the same time, why of course they are not worth near as much; so, with deficient weight, and deficient in intrinsic value, compared with the latter varieties, we say they pay no man to grow them. This may be considered "*self-sufficient*," "*captious*," "*practical gardener*" like, but we give our experience on this matter, and wish it taken for just what it is worth, *and nothing more.* I do not deny that the "Chasselas" varieties may be sold in Buffalo at prices to suit the grower there. We will take Mr. Eaton's word for it. But suppose some "*wide awake*" should run up there and put Muscats in that market at the same price the "Buffalonians" were selling the Chasselas for, what would the Chasselas be worth per pound then?

Mr. Eaton can instance a very good forcing-house that was not only "glazed *all round*," but with the exposed end facing nearly the north. They did not grow grapes, but plants *infinitely* more tender were forced successfully. What plants were they, Mr. Eaton, that require more heat than a Muscat of Cannon Hall? Do pray tell us, and let these "fountains of all horticultural knowledge" know.

This house, too, "being a part of a range of sufficient extent *to require* some three thousand feet of pipe, worked from one boiler." This sentence seems to me to be written in a very ambiguous style: "*to require* some three thousand feet of pipe, worked from one boiler." Does this mean that three thousand feet of pipe are actually worked by one boiler? or does it mean that it is *only wanted*, and that it is *still now wanted?* A very good boiler this, if it is in actual operation; but if it dwells only in the regions of ideality, it amounts to nothing. Who is the maker, Mr. Eaton, and *where*

can it be seen? Tell the readers of this journal *where* this wonderful piece of machinery really is, so that some one of us can come up to Buffalo and lay our hands on its iron sides, and cry aloud to the world,

VERILY, THOU ART THE BOILER!

[Mr. Ellis having omitted to state what kinds of houses he grows his grapes in, we supply the information, as it may be of use to Mr. Eaton in his reply. His forcing houses are all *lean-tos*, but by no means *sheds*, being plain, but neat, substantial, well-built working houses. One range, some three hundred feet in length, starts about one foot from the ground, with a low pitch, and is the first forcing house. Another range, about five hundred feet in length, starts some two feet from the ground, has a steeper roof, and is the second forcing house. There is still another range, similar to this. The roofs of all these houses are straight. There is but one cold house, and this has a double pitch curvilinear roof, and works well; the wood, foliage, fruit, color, and bloom, all being excellent. This curvilinear house is placed between two of the forcing houses. This discussion naturally involves the most important points in grape culture, such as the best position for a house, the best form to give it, the best mode of constructing it, the best mode of heating it, the best varieties of grapes to grow in it, &c., and may be conducted so as to bring out a vast amount of information useful to all grape growers. We suggest that Mr. Eaton and Mr. Ellis both forget themselves on the merits of their subject.—ED.]

CULTURE OF THE JAPAN LILY IN POTS.

BY DANIEL BARKER, GARDENER TO B. K. BLISS, SPRINGFIELD, MASS.

LILIUM LANCIFOLIUM, with its many and beautiful varieties, is very easily cultivated, and no plant is better adapted to the amateur; and when well grown in pots, they are among the most beautiful of all pot plants. Their fragrance and great beauty render them very useful for decorating the greenhouse, conservatory, plant cabinet, or sitting-room.

For good-sized bulbs the pots should be from ten to fourteen inches in diameter. Plant three bulbs in a pot, selecting such as are double crowned, which are much more suitable for pot-culture than those with single eyes. Plenty of drainage at the bottom of the pots is quite essential. The compost most suitable for potting is three parts good peat soil, and one part fresh loam, from an old pasture, with the sod well rotted, and a small quantity of coarse river sand. Fill up with the compost to within four inches of the rim, place the bulbs at equal distances upon the surface, and cover with another inch of soil, leaving the crown of the bulbs exposed. After planting, which should be from the middle of November to February, they may be placed under the stage of the greenhouse, where the drip from watering will not fall upon them, or in a light cellar, where they are not affected by frost *or a furnace* wherever they are placed. Let them have plenty of air whenever circumstances admit of it. At this stage of their growth they will require but a moderate supply of moisture, keeping the soil in that happy medium between wet and dry. As they advance in growth they will require it more frequently. Whenever the green fly make their appearance, let them be destroyed without delay by fumigating with tobacco smoke. About

the middle of April they will commence to grow rapidly, when they will require a greater quantity of water, and will be benefited by frequent syringing during mild evenings. They will now require an abundance of fresh air. If in frames, raise them by placing blocks of wood under the corners, and remove the last entirely during mild days. By the end of May they will require to be turfed up by placing lumps of peat round them above the rims of the pots, leaving a space of about three inches round the stem, which must be filled up with fine sandy peat; into this they will root, which will be of great benefit to them. The stems must be kept tied up, and the plants removed to the greenhouse or some convenient place where they can have an abundance of light and air. Continue to keep a watchful eye upon them for green fly. About the end of June commence to water them regularly with soot water, which is made by placing one peck of soot in eight gallons of soft water. Stir it well, and after it has settled skim off the top, when it will be fit for use; with this continue to water until they show signs of flowering. When the flower buds appear, the flowering may be hastened by placing them in a warm greenhouse, kept rather close and moist, as they will not draw up after they have reached this stage of their growth, and will bear a high temperature, if kept well supplied with water. Where there are several pots of these, it is desirable to have them flower in succession, which can be done by placing some of them in a cool, shady place at the same time that others are placed in the greenhouse. As soon as the bloom is over, place them where they may receive the full influence of the sun's rays in order to ripen the bulbs well. Whenever hard rain-storms occur, turn the pots on their sides. Diminish the water gradually until they are quite dry. When the stems are dead, cut them down, and place the pots in some dry place until the next season, when they may be turned out of their pots, the best bulbs selected for pots, and the rest planted out in the garden.

[Very seasonable and very good. Anybody ought to be able to grow these Lilies after reading such plain directions.—Ed.]

THE GRAPE REVIEWER.

BY WILLIAM BRIGHT, PHILADELPHIA.

The second part of Mr. Fuller's Review of the Grape Question, in the October number of the Horticulturist, is so grossly erroneous in the description of my proposed inside border, that I feel called upon to reply to it. Mr. Fuller quotes from Hoare on the Grape, to show that he had suggested an inside divided border, and consequently that my border is not new. But (as I have said before) Hoare did not suggest a *detached* border, in which the originality of my border consists; and yet, the very evils which were complained of in Hoare's inside border, Mr. Fuller attempts to fasten upon mine.

Mr. Fuller says, "These divided borders with *impervious bottoms* have been thoroughly tried in England, and in a few instances in this country; and we regret to say that in most instances they have failed to give satisfaction."

"Again," says Mr. Fuller, "the fine sediment that will descend to the bottom [of such borders] and fasten itself there, will form a thick puddle that

will prevent the surplus moisture being carried away, and the roots that come in contact are consequently destroyed."

Mr. Fuller adds: "Thus it appears that *this very border* that is recommended by Bright, and put forth as new, is an old feature in grape culture, and one, too, that has been condemned by some of our best and most experienced gardeners."

Now the fact is, that my inside border has not an *impervious bottom*, as Hoare's had, nor does it rest on solid concrete. The bottom is formed of open, dry brick-work, elevated four inches above the floor or concrete, and *it is as porous as a sieve.* Mr. Fuller constantly speaks of Hoare's border as a "detached" one; but the very fact that it was not *detached* (or separated) from the front wall, and from the floor, as mine is, and that it was not readily and perfectly drained, formed the reasons why Marnock "doubted its practicability," and Johnson pronounced it a "failure," as stated.

No "thick puddle" can ever stand in the bottom of my detached border, which is, to all intents and purposes, a large open brick pot, suspended in air. The water must stand five or six inches deep all over the floor of the house, before my border will cease to part with all excess of moisture beyond that which the soil is capable of holding in its pores or substance. The only difficulty that I have found with this border is, that if not properly made it drains too freely, and requires a larger amount of water than borders resting upon concrete, or upon the soil. But this difficulty is more than compensated by its peculiar merits. The perfect control of moisture which the detached border affords was noticed in my article in this journal last month, and the vast importance of its thorough drainage was fully stated.

I now reassert my claim to originality in this *detached* border. I did not know before that it was so thoroughly original. I thought it was, because I had never seen or heard of one so made; but I did not positively know that one like it had never been made or suggested. These attempts to prove that it is not new, exhibit most distinctly its originality and merit.

Mr. Fuller says my detached border is "an old, condemned feature in grape culture." In view of the facts above noticed, and as Mr. Fuller is fond of antiquarian matters, I think I may be permitted to quote, as applicable to his case, an epitaph on a tombstone in England, erected somewhere about 1731, over the remains of one of his namesakes, which reads as follows: "Here lies Fuller's earth." I trust, Mr. Editor, that you will consider this remark as entirely within the limits of that "friendly way" in which you propose to have this discussion conducted. As Mr. Fuller permitted the article in question to go to press after personally inspecting my border at Philadelphia, during the late session of the Pomological Convention, seeing with his own eyes that it had not a wet, *impervious bottom*, resting upon solid concrete, I think if anybody has violated the proprieties of horticultural discussion, it is himself.

The inside detached border I consider the best in use for grape culture under glass. I am constantly introducing this border into the most elegant and costly houses around Philadelphia, having just finished seven fine houses on this plan; and it scarcely suits my ideas of truth and justice to have my plan so perverted in the description, and then denounced as "old, condemned, and worthless in practice," as it has been by Mr. Fuller. You, Mr. Editor, have seen my border, and know the facts, and I confidently appeal to you to let me be heard, in my own rude way, in its defence; and as you

propose to act the part of Judge in this matter, and to "sum up" by and by, I cheerfully submit the case to the decision of your genial and intelligent mind.

May it please your Honor, Mr. Editor, I rest chiefly upon the following as new and useful hints in grape culture, recently presented to the public by myself:

1st. Bright's method of growing grape-vines in the grapery and vineyard. All the new wood to be produced from buds within a few inches of the root, and not from any long stem or branches. Wood alone to be grown one year, and fruit the next. Vines to be cut entirely down every other year, after fruiting. Short canes, carefully stopped and concentrated, with no long arms or laterals. Plants to be two feet apart in the row, so as to keep a fruiting and a growing set constantly on the same border or vineyard, (half fruiting and half making wood.) Is there anything new or probably useful in this?

2d. Bright's inside *detached* and divided border, separated from the front wall of the house, and from the floor, by a four-inch air-flue, thoroughly pervious to water, and perfectly drained, so as to obtain complete control of the heat and moisture of the border. Has precisely such a border been proposed by any other writer, or has such a border ever been in general, or even limited, use?

[We must do Mr. Fuller the justice to state that his article was sent to us as a whole, and that we divided it as a matter of convenience, on account of its length. It is all printed as originally written before Mr. Fuller's visit to Philadelphia, and he has not seen it since. We must also here state that Mr. Bright's inside border has not an *impervious* bottom, and that there is no possibility of water accumulating in it. Mr. F. has now seen it, and will of course correct his misapprehension in this respect. We have noted your points, Mr. Bright, for our "summing up."—Ed.]

DWARF PEARS AT THE SOUTH.

BY H. A. BIZZELL, CLINTON, N. C.

By request I willingly give you the information concerning my pear-trees, so far as I am able.

The pears I sent you were grown upon dwarf trees seven years old, that have now produced full crops for the last three years. The trees were grafted upon the orange quince, in the spring of 1853, and transplanted into my vegetable garden in the spring of 1854 in the following manner:

I excavated the earth in holes about two feet square, and the same depth; filled these holes up to within about six inches of the top with a compost of equal quantities of vegetable mould, refuse from a smith's forge, and well-rotted stable manure. On this I set the trees just so that the junction would be beneath the surface, and filled the remainder, that is, around the roots, with surface soil, taking pains that the roots should be distributed evenly and horizontally.

They were planted just ten feet apart on one side of the walks, and after setting out, I cut them back to about eighteen inches. For the first year, I simply rubbed or pinched off all except about three or four buds nearest the

top, intending to make the most erect branch a leader in some cases, and in others to prune in the form of a large and deep vase.

The second year I had but little pruning to do, except when I had leisure. At any time when I saw a cross-shoot, or one that was likely to be so, I either pinched it or cut it off. Since that time I have seldom used the knife upon them, except to supply my friends with cuttings; in such cases, you know, we generally take young shoots.

I never thin out fruit of any kind, but let the trees bear as many as they will. I frequently use props or forks under the branches, to keep them from breaking under their burden.

A friend of mine counted on a branch of a Washington tree seventy-five pears, and the branch was not over one inch in diameter. I have on one or two occasions, when one of these trees should be slow to bear, cut the main branches severely in the month of July, or root pruned in the same season, but only in two cases that I now remember.

Most of my dwarf pear-trees are branched from very near the roots, not having trunks more than from four to twelve inches in length. The trees are now from seven to fifteen feet in height, and the stems or trunks now from five to seven inches in diameter, with large and spreading heads.

The soil is naturally a rather weak sandy loam, with a clay subsoil. In this case the clay is within ten or twelve inches of the surface, but the subsoil is dry. This region is slightly undulating, but not hilly; about the intermediate line between the sea-coast and the hilly regions of our state. The Pinus palustris, or pitch-pine, is the chief growth on the level lands. On the swamps a much richer growth. I do not exactly know the elevation above tide-water, having no barometer in our town, but I think I have been informed that we are about two hundred and thirty feet above.

Manure does well upon our lands, and I am sure that much of my success in raising pears is from their situation, where they receive clean culture and plenty of manure. I have trenched my garden as deep as eighteen inches, and filled the trenches with dry muck and stable manure.

The trenching was done four years ago. Since then I have given a fine top dressing to it every winter, which has been hoed or plowed in the following February.

I once used guano and night-soil on this garden; either of these is too strong for dwarf trees, and I lost several with blight that year. I have a friend that uses quantities of guano every year, (as he is a market gardener,) and every dwarf pear in his garden either dies entirely, or shows signs of blight. I think a good top dressing of night-soil, composted or not, will kill any dwarf pear-tree in this region, and a good dressing of guano will do the same. This may be a mistake of mine, but I firmly believe it, and I think blight can as frequently be accounted for in this way as in any other. Bad management, unhealthy manures, any where in the vicinity, cause blight. You may consider it egotistical if you like, but I can not refrain from saying that last year I gathered from one tree of the Beurré Diel pear one hundred and seventy-one pears that would average from ten to twelve ounces each, and the tree is not more than seven feet high. This year, from a tree of about the same size, I gathered over three hundred Seckels, one of which I sent you, but not the largest.

[We have to thank you, Doctor, for the valuable information contained in your article. Your trees were well planted, and in a most excellent com-

post. The vegetable mould we are not surprised to find in your compost, for we had already expressed the conviction to Dr. Grant, that you had used it largely in growing such pears as you sent us. If you have read any of our pear articles, you will have found that we give vegetable mould a leading place; you could have used nothing better. Your summer pruning is judicious, and done at the right time; and we approve your plan of branching the tree near the ground. Your location we judge to be an excellent one for both the pear and the grape: we gather many useful hints from it. You will do well to let guano alone; we have taken frequent occasion to discourage its use, for we believe it to have done more harm than good, especially in inexperienced hands. We had supposed that you thinned the fruit freely in order to produce the beautiful specimens you sent us, and are surprised to learn that you do not. You must be careful not to carry your indulgence too far, for there is danger of impairing the constitutional vigor of your trees. Now if you get such results without thinning, what may you not do with it? Try it next year on a portion of your trees, and let us know the result.—Ed.]

THE CRIMSON CAMELLIA-FLOWERED PEACH.

(*See Frontispiece.*)

BY THE EDITOR.

We present, this month, for a *Frontispiece*, a drawing of a comparatively new double-flowering Peach. The flower, it will be seen, is of much better form than the old kinds, and also of more brilliant color. It is an appropriate and beautiful object for a lawn. The double-flowering peach is seldom properly grown, being left mostly to take care of itself, in consequence of which the branches become naked, and the whole tree unsightly. It should never be planted except on a dry spot. Enrich the soil with old manure, spread the roots out carefully, and in filling up work the soil in between the roots with the hand. Let the tree branch within twelve or eighteen inches of the ground, and every spring cut in at least one-third of the new growth. The effect of this will be to keep the tree compact, and well furnished with young wood and leaves, and the bloom will be more abundant. A circle round the tree should be kept free from grass and weeds, and every second year a top-dressing of old barn-yard manure may be applied with advantage. In forking this in, be careful to disturb the roots as little as possible. A spade should never be used for this or any similar purpose. If these directions are followed, the result will be gratifying indeed.

EUROPEAN PARKS.

BY HOWARD DANIELS, NEW YORK.

Quatreniere de Quincy, in his essay on "The Nature, the End, and the Means of Imitation in the Fine Arts," draws attention to the difference between *copy* and *imitation*. To me the difference is clear enough, and, no doubt, is so to your readers; at all events this is not the place for a necessarily long disquisition on the subject. In this paper I purpose to give a

short account of some of the European Parks from actual observation, convinced that at present, when park making is here becoming an institution, such matters can not be without interest.

The leading characteristics of the European public parks are breadth of lawn, extent of foliage, and in most cases a tolerably complete system of drives and walks. They are regarded as the lungs of the cities to which they are attached or by which they are surrounded; and, whatever may be their shortcomings in an artistic point of view, there can be no question of their utility. In all the older parks, such as Hide Park, ample accommodation for riding, cricketing, boating, and the like is provided. Regent's Park has no boats, but a very good gymnasium furnished with the usual ladders, parallel bars, swings, &c., which is extensively used. Battersea Park and Victoria Park of London, and almost all the modern parks attached to the great towns, such as Birmingham, Manchester, Leeds, Sheffield, and Liverpool, are similarly provided, some of them with a gymnasium for the exclusive use of the fair sex. The sight of numbers of persons engaged in active games at once, stamps the character of the park as a place for popular recreation, as the seclusion, shade, and general retired air of Kensington Gardens mark them as the resort of the ultra fashionable society of London.

So little has hitherto been done to the Victoria Park, and that little so indifferently, that it is unworthy of criticism, as is also Battersea Park; though much has been done there, it is acknowledged in the profession to be an example of every thing which is not praiseworthy. The new gardens at Muswell Hill I have not seen, but from the names of those engaged on the work, I form high expectations. The grounds of the Crystal Palace at Sydenham were laid out with a considerable error as a basis of operations. These grounds are too irregular by nature ever to admit of any successful treatment in any but the natural style. I have no doubt the error was caused by the excessive care used by Sir Joseph Paxton. While studying the grounds he had a glazed perch set up high on the central part of the palace: there he would sit by the day, and, becoming accustomed to the flat appearance of the ground as seen from that height, overlooked the difference which a descent to the level produces. This mistake has utterly ruined the grounds in the vicinity of the palace. The geometrical style is only satisfactory as long as the geometry is apparent; it avails little to know that by climbing a hill and descending a slope half a mile off we shall find an exact counterpart of the object we are then viewing: we can not take geometry on trust; the *pendant* must be seen to be of any value. The terrace walls are also very faulty, presenting the appearance of having sunk into the earth, and to be still sinking. Nothing is more common than this fault; a retaining wall or abutment of architectural character is generally marred by having no plinth corresponding to the slope of the earth embankment. This need not be parallel to the slope, on the contrary a series of steps would be best. The gymnasiums, archery, and cricket grounds are numerous and extensively used; and the water display, when the fountains work, is unequalled. And here let me say, that the fountains are just what they should be: a water composition should have water for its principal feature; and while for a comparatively small flow of water architectural accessories are advantageous, when a very large body of water is set in motion, as at Sydenham, any addition of vases and urns, spouting marine monsters and the like, would mar

the whole thing. If made colossal, they dwarf the water display; if made of life size or little larger, they look puny and toy-like. I am now speaking only of spouting fountains; cascade fountains are quite different, and may be much enhanced by architectural surroundings.

The public parks of Manchester are not yet very attractive to the stranger; they have considerable merit, and in time will be very pleasing. The same may be said of those of Sheffield and Leeds. Of the arboretum of Derby, however, I can speak in the highest terms: with only fifteen acres of ground at their disposal, the trustees have succeeded in giving to the inhabitants of Derby a great boon, and to the public a model of what may be done by the judicious expenditure of moderate means. It is needless to say that in this case there was no amateuring it; the gentleman who undertook it was of known ability.

The parks of Liverpool have been so often described that I fear to weary your readers by referring to them at the length they deserve. This much, however, I think it well to state: the great charm of the Prince's Park is to be found in the beautiful style of the garden and the high order in which it is kept, while the great charm of the Birkenhead Park is its intricacy and quasi snugness; this latter quality Englishmen prize highly. I can not, however, dismiss the Birkenhead Park without remarking the very great beauty of the sheets of water. From no point are the limits discernible; all is easy, graceful, and natural, with a single exception where the banks approach each other very closely, both slopes being convex. The walks by turns approach and leave the margin of the lakes; at every ten yards a new vista presents itself: the intricacy produced by an apparently simple plan is marvellous! I made nearly a complete circuit of the first lake without knowing that I had done so; it was only by recognizing one of the bridges that I found out where I was. The entirely different aspect which the banks of the lake continually present is completely illusive. This work, in short, is in the highest style of art, and presents a marked contrast to the celebrated Bois de Boulogne at Paris, where the water is very much like an irregular canal; every part can be seen from one end, and the drives follow the margin with scrupulous and hideous exactness. The Bois de Boulogne shows the hand of the military engineer, not the fancy of the landscape gardener. Strange as it may appear, the French, with all their elegance of character and subtlety of *esprit*, are entirely without correct notions of landscape gardening. Since the time of Le Nôtre in the days of geometry, long straight avenues and square clipped gardens, they appear to have made no approach to a better style. The reason, I believe, to be this: No Frenchman cares a straw for nature; no Frenchman ever leaves Paris from choice, or is ever without light-colored kid gloves, a Palais Royal cane, and varnished boots. Besides, they care too much for what they eat. A prospect which can be enjoyed by Monsieur Lèotard and Mademoiselle Rigolboche from the windows of a suburban restaurant after a too hearty dinner, is their only notion of *la campagne;* nature is with them associated with *la province*, than which the dictionary contains a no more hateful word: it means bad dinners, bad *toilettes*, bad beds, and bad company. If any proof were needed, it is contained in Chateaubriand's sentimental tours, in Lamartine's high-flown rhapsodies, in every unfledged poet's soliloquies. George Sand, however, in the *Maitres Sonneurs* and other works, shows considerable appreciation of the grandeur of park scenes in natural forests, and with all her faults has the material in

her to make a good landscape gardener. In all French works the military heel stamps the sod, and leaves a mark.

The waterworks of Versailles and St. Cloud are very fine, the architectural decorations of the fountains in many cases good, the terraces imposing, and, where a geometrical arrangement is suitable, these works possess considerable grandeur. The long broad *allées*, so suitable for display, are adapted to a people gregarious in their pleasures. Grounds of this character, however, require to be filled with people. Versailles is nothing without 20,000 people in front of the building; under other circumstances it is as melancholy an an empty ball-room. On this account, its suitability to display, there is no style so fit for a public park of moderate dimensions, if surrounded by a city. Where we can never get so far from the boundaries as to lose the prospect of chimneys and roofs, it is useless to try to imitate the scenery of the Adirondack Mountains. However well done, it can never rise above mediocrity, and will resemble the Swiss *châlet* and waterfall in the Colosseum in Regent's Park, a thing very well executed, and really illusive, but nothing better than a conceit considering its situation. Works like the Tuileries gardens admit of no style but the geometric; the same is apparent in the Champs Elysées and the Luxembourg gardens. There was, however, nothing to prevent Versailles, St. Cloud, or Fontainebleau from being laid out in the natural style. Geometry need not, in such cases as city parks, be carried out in detail. All that is necessary is, to get enough geometry to produce the sensation of regularity; our way should be clear and direct, our relative position with the lines of the park, its compass points, should never be doubtful. We must feel rather than see that we are going in the direction we intend. To produce this does not require so much skill as common sense, a quick and correct eye to take in the advantages of the ground, and judgment to choose the best means to the end. For the purposes of immediate enjoyment, space for *fêtes*, promenades for the court, &c., the French royal palace grounds are eminently well adapted, and Le Nôtre is acknowledged to have been a professor of brilliant talent. That he did not design in what is now known as the natural style, is due to the age in which he lived, and the influences under which he worked.

In my next I propose to notice some of the leading American Cemeteries and Parks.

FRUIT GROWING IN IOWA—ITS DIFFICULTIES.

BY H. D. IVES, EDDYVILLE, IOWA.

To aid me, an amateur fruit-grower in central Iowa, I have for some time been a subscriber to four Agricultural and Horticultural Journals, but as none of these papers has discussed the subject of fruit-growing as applicable to this climate, to the extent desired, I became a subscriber to the HORTICULTURIST. I am now in receipt of two numbers of this paper, and may say that I am much pleased with it. I trust you have any number of subscribers in this State, and for the reason that there are thousands of the citizens of Iowa who are interested, and deeply interested, in the subject of fruit-growing; and they need just such a journal as yours is, one that is to a great extent devoted to this subject.

You may know that up to 1855, Iowa had some reputation as a fruit-growing State, and that the HORTICULTURIST of that year published several articles giving an account of "Iowa monster productions," "Magnificent Apples," "Peaches near 12 inches in circumference," and "Pears weighing 1½ pounds," etc. Now, while these accounts were no doubt true, yet as fruit-growing at that time was mostly confined to a portion of the country adjacent to the Mississippi River, the State, as such, could not be said to have established her reputation in this respect; and even the portion of country mentioned had not then passed through the ordeal of the winter of 1855–6. But whatever may have been our character at this time, we can hardly be said to have a good reputation for fruit-growing now. Indeed, perhaps nine persons out of every ten who have lived in Iowa during the last ten or fifteen years will say this: "That there is no use trying to raise fruits here," that "the climate is too changeable," "too hot days in summer and cold ones in winter," or that "the soil is too rich," etc., etc. Now, without pretending to agree with the public as to the particular cause of our failures, or of all of them combined, which it is alleged have produced this result, yet the experience of the writer is in conformity to that of the mass of the people, or, in other words, that the results justify a verdict of this kind.

I have lived in the portion of Iowa known as the Des Moines Valley for sixteen years, and to the present writing have never seen a *Pear, Quince, cultivated Peach, or Plum, growing here.* We have a plenty of the wild plums, but the winters are said to be "too cold" for the cultivated sorts. During a few of the years mentioned, say three, and at most four, some few have been successful in raising seedling Peaches, but these have been exceptions to the rule. Now what is to be done? Shall we stop making experiments, and thus confirm our already poor reputation? We say not. We have already *learned* from experience that we have some grounds for hope. For instance, we have learned that *certain kinds* of Apples may be raised here, and with very great certainty; and the same is true of Grapes. Pears are growing in some places on the Mississippi River; why may they not be grown here? And so of the Quince, Peach, Plum, Cherry, etc. The writer has been of the opinion for a long time that proper exertions will yet be crowned with success, and he is therefore now acting and will continue to act on the strength of this belief; and we know that there are hundreds of others scattered all over the State who think likewise. The last spring we planted Peach pits, and they have a fine growth. We also grafted the Peach into the wild Plum, and set out others from the nursery. We also set out Pear-trees, dwarf and standard, standard and dwarf Cherry-trees, with a considerable quantity of small fruits known to be tender here, and all have grown luxuriantly. It is, however, fall now, and what we wish to learn by this communication is, (and I trust you have a thousand readers as much interested as I am,) *how may these young trees be preserved through the coming probably "Iowa" winter?* And here it may not be amiss to state what we *have* heretofore done in the way of winter protection. Four years ago (upon the recommendation of the "farmers' club" and others to the effect that they "were hardy") we paid fifty cents apiece for a dozen roots of the celebrated New Rochelle Blackberry. They grew well every summer, and died to the ground each winter. Last fall we set out for winter protection for them. We made frames around them, bent down the canes, covered them with brush, and the brush with straw. When spring came, and the said

covering came to be removed, judge of my surprise when it was discovered that, as before, they were dead to the ground. This experiment with the New Rochelle Blackberry ends for the present, after four years' trial, with the raising of eight berries, and all of which the birds (Henry Ward Beecher's) got before they were fully ripe. Now for the Peach-trees. After winding their stems with cloth, we made and placed frames around the cultivated sorts, leaving the seedlings to stand the winter or not. These frames were then filled with straw, and thus they remained through the winter. Upon removing their covering late in the spring, it was found that the limbs were killed to near the body of the tree; and again, that the seedlings had fared no worse than their neighbors. And all this happened while the thermometer did not reach to exceed twenty-two degrees below zero. Of course we did not commence spring operations in very good heart, having an eye to the future, but nevertheless we set out more trees the last spring than ever before; and, die or live, it has done me some good to see them grow during the summer. But more than this: we are still ready to make more experiments, in fact, do almost anything to save these young trees from the perils of the coming winter. Any hints or any suggestions, therefore, that you may give on the subject of raising fruits in this climate and at this time, having particular reference to *winter protection*, will be gladly received and acted upon. Will you not "come over into Macedonia and help us?"

[We shall very cheerfully do so; it is for such we labor. We could help you more efficiently, however, if you had told us somewhat precisely the nature of your soil, the prevalent direction of your winds, in what way and how far you are protected, and other matters of like kind. Your soil may be, like that of some of the western States, light, very rich, and deep, but without body, and the roots of the trees being unable to find any secure hold, they are swayed by the wind, the roots loosened and drawn out, and the trees thus perish. It may also be that you have no sufficient protection, by belts of timber, from the cold and heavy winds of winter. The trees in your rich, virgin soil make a rampant growth of wood deficient in density, which ripens imperfectly in the fall, and is consequently winter-killed. Let us know more precisely the conditions under which your trees are growing, and we will give you the best advice we can. You have undoubtedly made some mistakes in the selection of your fruit. There are some varieties of northern apples which we have no doubt will succeed with you; and so will some of the pears. Peaches you had better let alone for the present, as well as the New Rochelle Blackberry, and other things of that kind, unless you take the trouble to bend them down and cover them with earth. But when we hear from you again, we will make out a list of fruit which we think will suit you, and give you some advice in regard to modifying your soil. Your determination to plant more, if it be only to see the trees grow, is admirable; such a spirit deserves and will meet with success. The best advice we can give you at present, is to bend down your peach-trees and bushes to the ground, and cover them with some six inches of earth, and on this throw some brush. Do it when the weather is dry. If your trees had been planted with a view to this, the operation would be comparatively easy. But we think we can put you in a better way for your future planting, if your evil is what we think it is.—Ed.]

PEARS ON QUINCE STOCKS.

BY WILLIAM BACON, RICHMOND, MASS.

A YEAR or two since we gave the readers of the HORTICULTURIST some items of our experience in growing the Pear on the Quince. Since then some "deadly foe" to this system of Pear growing has given your readers his opinion of the fallacy of this method of cultivation, and has referred to Pittsfield, an adjoining town, as *one place* where dwarfs have failed. How many such failures there may have been in that town we do not know, nor are we informed of any particular cause of these failures. Yet if the people of Pittsfield tell us the truth, they have not given up, though vanquished; for several reliable citizens have informed us, within the last six months, that they had Pears on Quince stock in cultivation, and were sanguine of success.

But let the failures or successes of Pittsfield and all the world beside be what they may, our own success, so far, is a fact that can not be controverted, for our trees have done well the past season, both in growth and productiveness, and they now stand as firmly rooted to the soil as any standards of the same age. This is provable by large numbers who saw and admired them when in fruit, and wondered how so small trees could bear so much, and wished I would send where I got those trees and get them some. Such is the condition of our dwarf pear-trees *now:* the future must develop itself.

Yet we can not recommend the cultivation of all kinds of Pears in this way. There are, consequently, some exceptions. We name, however, a few of the varieties that, so far, do well and promise well with us.

The *Rostiezer.* This tree is a firm grower and abundant bearer. Its habits of growth are peculiar, if left to itself. The branches need to be checked in their spreading propensities.

The little *Seckel* has done well here. It is of slow growth, but stands firm, and this year the trees have given an unusually fine crop. It makes one of the smallest of dwarfs, and may be safely set six feet apart.

Louise Bonne comes early into bearing, grows strong, and bears well and uniformly. Indeed, the fruit usually needs thinning to give it size and prevent exhaustion in the tree.

Beurré Goubault. With us this dwarf has a peculiar way of growing as it likes, and rejects symmetrical proportion altogether. It, however, makes amends by being a constant and liberal bearer.

The *White Doyenné* naturally gives fine proportions, and fair, beautiful fruit. It appears to be perfectly at home on its quince foundation.

Glout Morceau does finely on the Quince. The tree grows just fast enough, makes strong wood, and bears well.

Beurré Clairgeau makes a beautiful dwarf, and its fine large Pears give a rich contrast to the diminutive trees that produce them.

The *Sheldon* is a firm-wooded, thrifty dwarf, and a beautiful Pear.

Beurré d'Aremberg. We would like to have unbelievers see our trees and decide for themselves. It promises well with us so far.

These are some of the varieties of which, if we speak at all and speak the truth, we must speak well up to the present time. Yet, after all, the future may bring a failure. If it does, we will say so.

We do not, however, recommend dwarf pear-culture to everybody, for there are some who are not fit to have trees any way. These are the class

who set them by crowding their roots into holes just large enough, by a little cramping, to thrust the roots in, and then the earth, turf, and all is thrown upon them, and they are left to their fate.' It is a pity if trees so set do not die. They become mere cumberers of the ground. If they live, their existence must be a sickly one, and death instead of life and fruit-bearing will be the result. Dwarf trees, like every thing else, must be fairly done by, and they will pay.

We do not know that dwarfs will succeed in all situations on all soils. The presumption is, that they will not flourish equally well in all localities. Nothing strange in that. The native and more hardy trees of the forest all have their favorite localities, and why may not fruit-trees? Ours grow upon a clay loam over a limestone formation quite free from superfluous moisture, and the soil made deep.

We believe that dwarf pear culture will be more generally adopted when it is better understood, and to those who wish to embark in it, we recommend the careful reading of "Field's Pear Culture," a work treating expressly on the culture of the Pear, and written evidently by a man of common sense, and extensive experience and observation. It is a great luxury, in this day of book-making and book humbuggery, to get hold of so practical, common-sense, and truthful a work in so condensed a form. Mr. Field gives beautiful illustrations of over half a hundred varieties of Pears and describes many others, with their good and bad qualities, besides telling how to raise them.

Since writing the above, I have taken up a six-year-old Napoleon that had unfortunately become too shaded by the growth of an apple-tree. I found the Quince on which it stood entirely dead, but a noble lot of roots had put forth from the Pear at the junction of the Quince. We reset the tree in a suitable locality, and feel confident of its future success. Inference. In setting dwarfs the ground should be made deep, and the Quince and from two to four inches of the Pear covered. Then the Pear will provide itself roots if the Quince fails, and make good trees.

[All very good, except the last, and that would not be so objectionable if the trees were worked low enough. The only sound general rule is to plant with the roots near the surface, and to buy no trees that can not be so planted.—Ed.

EDITOR'S TABLE.

To Contributors and others.

Communications, Letters, Catalogues, Periodicals, &c., intended for the perusal of the Editor, and packages by Express, should be directed to the care of C. M. Saxton, 25 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

NEW SUBSCRIBERS.—The time has nearly arrived when we look for a large accession to our subscription list. New names are already coming in, and if our old friends would interest themselves a little, the number would swell rapidly. Now is the time to show your sincerity. Our publisher is preparing a premium list which will add a stimulus to your exertions. Do not wait for that, however, but go ahead.

SOMETHING THAT HAPPENED AT ORANGE.—Something happened at Orange, and we went to see it. It happened at our publisher's. There were lots of people there, and bouquets, and girls, and flowers, and every thing looked cheerful and pleasant. By and by the company all went into the big parlor, and we went in too. Then our publisher's daughter came in, all dressed in white, and looking as pretty as an angel; and a tall young man stood by her side. Then a grave-looking man stood in front of them, and said something to them, and they looked very solemn; but presently he stopped, and then they looked glad, and all the people looked glad, and went up and kissed them, and we did the same, and rather liked it, and kind a got agoing that way, and had a good time of it. But such things can't last for ever! so we said good-bye to Carrie and the tall young man; and the last we heard of them, they were eating chinquapins down in Mississippi. And that's what happened at Orange.

HASLAM'S AURICLES.—We have just received one of these helps to the deaf, and shall give it a speedy trial.

MESSRS. THORBURNS' BULBS.—On examining in detail the bulbs spoken of last month, we find among them some very rare ones, and some quite new, and among others the following: Lilium candidum striatum, L. fulgens incomparabile, L. Thunbergianum, grandiflorum Sieboldii, L. colchicum, (Szovitzianum monodelphicum,) L. puniceum, recently introduced by Siebold and De Vriese, and said to be magnificent; Tulipa clusiana, T. cornuta, (Chinese.) T. Gesneriana, (very large;) Iris Japonica, (new, and said to be very beautiful,) I. Kæmpferi, (a novelty from Japan, said to be splendid;) Golden-striped Lily of the Valley, (Majalis;) Brunsvigia multiflora, B. pumila, (rare,) B. Josephina, (our bulb weighs *six pounds*, and is much the finest we have ever seen;) Nerine curvifolia, (the finest of them all.) N. Fothergillii; Ixia viridiflora, (the prettiest of this class;) a number of new hyacinths, tulips, &c., all of them remarkably fine bulbs; and for which we return our thanks. Bulbs are indispensable for winter blooming; and everybody should have them, and plenty of them.

NEW GRAPES.—We have received during the past month or so a number of New Grapes, which we group here together for a few remarks. For some time yet the cry will be, "Still they come;" and we might as well say at once, of not a few of them, "Let them go." We rejoice at the spirit that is abroad on this subject, because we believe that it will be productive of good results; but it is time that we began to judge all new comers with some degree of severity, and let none pass that can not show a high character.

Creveling.—We first saw this grape in Philadelphia at the Pomological Society, and subsequently received a box of it from Mr. Goodwin, of Kingston, Pa., from a bunch of which our engraving was made. This grape resembles somewhat the Isabella, but is still quite distinct from it. The bunch is rather narrower, the coloring matter of the skin is of a deep purple, the berries are covered with a thick bloom, and it ripens much earlier. It is a sweet and pleasant grape, and of value for its early maturity.

Bloom.—About a week subsequently we received the Bloom Grape from Mr. Merceron. Being struck with its resemblance to the Creveling, we compared the two, and could perceive no difference between them. We have no doubt are one and the same.

Cuyahoga.—This we received from Dr. Grant; but it was not ripe. As we expect to have it mature, we say no more about it for the present.

Bullitt.—For this we are indebted to Mr. Quinby. It is a green grape, the bunch and berry both small. It was unripe, and without flavor.

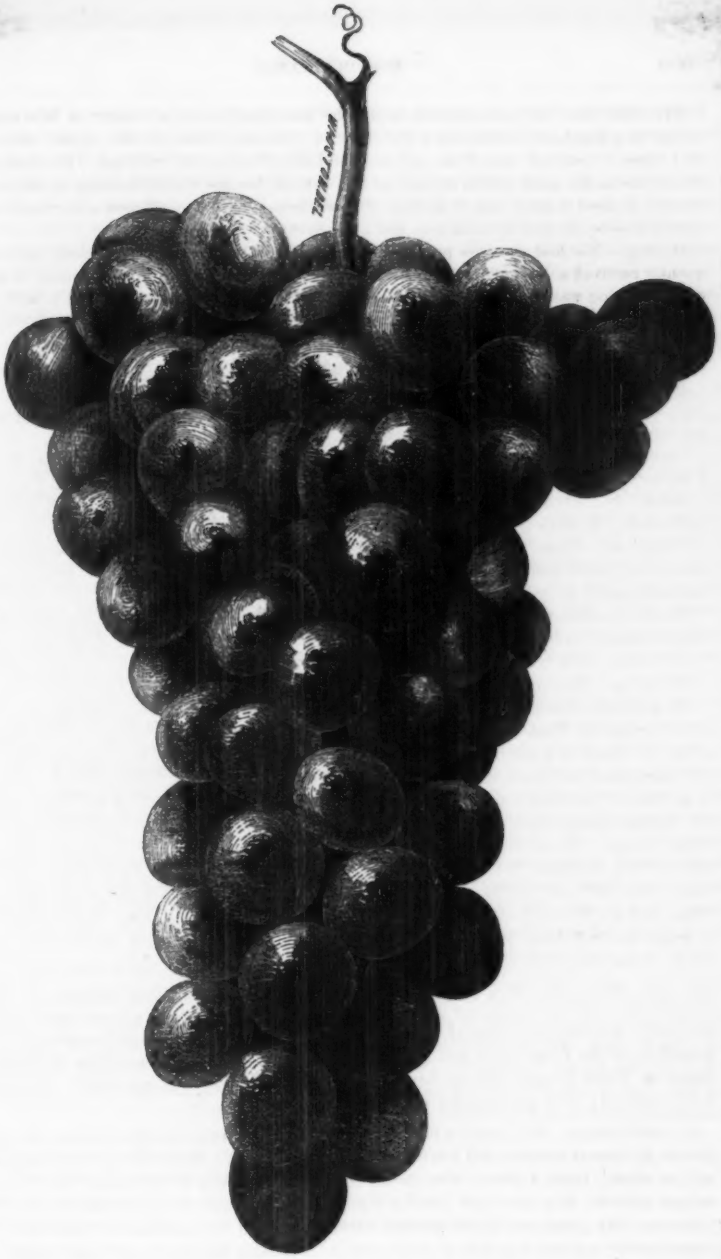
Montgomery.—From Mr. Merritt, of Hart's Village. Bunch large and handsome; berry round and below medium size; color green. Unripe, and quite acid. It is evidently a Chasselas seedling, and we should think not hardy about here.

Merritt's Seedling.—Also from Mr. Merritt. Bunch smaller than the preceding; berry below medium; color greenish amber. Riper than the Montgomery, and we should think a better grape. This is also a Chasselas seedling.

Mazatawny.—Not quite ripe, but it has flavor, and we put it down as a promising grape.

We have also received a number of grapes without name, and some of them quite immature.—From Dr. Weeks two varieties, quite unripe. One we take to be the Herbemont. From Mr. Sampson a small black grape for a name. We are sorry to say that at present it is not worth one, and gives no promise of ever being so. Bear in mind, Mr. Sampson, that it is no fault of ours that we are compelled to say so; it is really the fault of the grape.—From Mr. Paxton a grape for a name, if we think it worthy of one. We do so think it, and shall name it soon. It has the merit, too, of being quite distinct, though we could wish the color were a little brighter. The bunch is large and well shouldered; berry round, of medium size; color dull red, inclining to green; pulp melting, partaking of the sweetness of the Diana and the flavor of the Catawba. It is a very promising grape.—Mr. Fuller brought us a grape received from Mr. Sacksteder, of Louisville, Ky. The bunch and berry are both small; color deep black. It is a very rich, saccharine grape, of which we should like to see and hear more. We have never seen it before, and do not know its name.—From Miss Chamberlin a box of grapes, the bunch and berry small; color black; sweet, juicy, and well flavored; ripens about the first of September. We have never seen it before, but think it is a seedling of the Frost Grape, and a great stride in the right direction.—From Mr. Wells, a basket of White Grapes, said to have been found in the woods by some boys. Bunch and berry medium; color green; juicy and saccharine.

A NEW SPIRÆA.—Mr. Negley a few days since sent Mr. Saxton a seedling Spiræa, which we saw by the merest accident, and it is too good not to be noticed. It is a hybrid from Douglassii, and, we should think, Callosa. The flower is mostly in the style of Douglassii, but of a more delicate texture. It is now (Oct. 18th) in bloom, some of the buds being still unexpanded. The leaves are dark green, and finely serrated, having somewhat the appearance of a Berberry. It is very pretty, and blooming late as it does, will be a valuable addition to our list of shrubs.



CREVELING GRAPE.

FRUIT RECEIVED.—For the following, not elsewhere acknowledged, we desire to return our best thanks. From Dr. Grant, a basket of Pears, containing Seckel, Flemish Beauty, Beurré Diel, Louise Bonne de Jersey, Beurré Bosc, Brown Beurré, Beurré d'Anjou, White Doyenné, Glout Morceau, &c.; also Delaware Grapes.—From Messrs. Ellwanger & Barry, Rochester, large and handsome specimens of Beurré Diel, Buffum, Urbaniste, Napoleon, Winter Nelis, Beurré Superfin, Beurré Gris d'Hiver Nouveau, Beurré d'Anjou, Louise Bonne de Jersey, Brown Beurré, White Doyenné, Oswego Beurré, Rapelye's Seedling, Beurré Bosc, Duchesse, and Sheldon.—From Mr. Chorlton, exceedingly large and beautiful specimens of Beurré Diel and Beurré Bosc.—From Mr. W. L. Ferris, a basket of fine Lawrence Pears.—From Mr. Howard, of Buffalo, large and handsome bunches of Catawba, Isabella, and Concord Grapes.—From E. D. Barker, well-ripened Isabellas.

HORTICULTURAL EXHIBITIONS.—We have in type, reports of the Hartford Co. Society, Kentucky Horticultural Society, Yonkers Horticultural Society, American Institute, &c., which we are compelled to lay over a month for want of room. We have done the very best we could.

THOSE CHERRIES.—F. R. Elliott, Esq., in a private letter, gives us the following rap about our July plate: "Don't, oh! pray don't give any more cherry engravings; or if you do, take even the cuts in Cox as models, rather than trust to the one who 'did' that of July." Truthfully, but kindly said. No, Mr. Elliott, we will give no more such plates while we retain the chair editorial. It is no sufficient excuse to say that the plate was not prepared under our supervision; but you and all our readers must have seen, from our apologetic remarks, that we were heartily ashamed of it. The simple truth is, that we did not know how bad the plate was until it was too late to get ready another. We are always ready to acknowledge a just criticism. We should be much pleased to have your notes; make them as much better as possible than those you allude to. Your description of the apple answers to Sops of Wine, which we occasionally see, and of which Washington is a synonym. Speaking of grapes, Mr. Elliott remarks:

"I had an opportunity of examining the Cuyahoga Grape, a few days since. It is nearly as large as Catawba; compact bunches; color of Rebecca; and a delicious, sprightly, aromatic grape, far better than Rebecca or Diana, but not equal to Delaware. Its size, color, and quality, however, place it, without question, as among the best of hardy grapes. As an amateur grape, it is indispensable. I have also examined 'Logan.' In size and quality, it is almost a fac-simile of Isabella; the bunches are not so compact; and it ripens, fit for market, before Isabella becomes at all colored. During the past few days I have met with a grape, brought from Massachusetts thirty years since, that has all the character and appearance of Diana. Is it possible that Mrs. Crehore did not grow that grape from seed? I shall visit the vine from which I saw fruit, and learn more of it."

Do so, and please let us know the result.

PRINCE'S HYBRID DWARF CHESTNUT.—Mr. Prince has sent us some chestnuts of very good size and quality, of which he gives the following account: "Trees ten feet high, bushy from the ground. They are seedlings from the hybrid Chinquapin, obtained by my father, by hybridizing the French Chestnut and the American Chinquapin. These trees began to bear at five feet, and are now covered with an abundant crop. The fruit averages larger than the American Chestnut, and is excellent.

THUJA AUREA.—We have just received a large and splendid specimen of this most beautiful of all the Arbor Vitæ, and also plants of the Wizard of the North, Admiral, Malakoff, and La Constance strawberries. The Arbor Vitæ was put carefully in a barrel, with hoops arched over the top to protect it, and came to hand in admirable order. It was certainly a *bright* idea, and we are delighted.

EDITOR OF THE HORTICULTURIST: — For the improvement of our horticultural societies, many of which are now holding their exhibitions, I would like to make a suggestion in regard to their *premiums*, viz:

Have *photographs* of the plants, flowers, and designs taken and colored. Give the exhibiter one copy; the society keep one, and sell as many as might be called for, and also to exchange with other societies.

For fruit, have the same, when copies in wax or plaster can not be procured. These would soon form a valuable cabinet; and the sale of the extra copies would soon pay for all.

These copies would be more highly prized by the exhibiter than money or a medal; as they would represent what he exhibited, which the money, or any thing else, does not.

The exchange of copies by different societies would increase the competition, and enable each society to see what progress they make from year to year.

Yours, &c., IMPROVEMENT.

[A very good idea; who will make a beginning?—ED.]

AN EXPLANATION.—We expressed some surprise last month that the Judges on Fruit, at the Brooklyn Exhibition, should have awarded the first prize to native grapes *grown under glass* in competition with those grown in the open air. Mr. Thomas Hogg, the chairman of that committee, has called upon us, and denied very pointedly that the committee did any thing of the kind; that, on the contrary, being convinced that these grapes were grown under glass, they passed them by, and gave them no prize at all. This is satisfactory, so far as the committee are concerned, and relieves those gentlemen from a grave responsibility. But the question arises, How, then, did these grapes get this award? Has the report of the committee been tampered with? We desire, for the sake of the reputation of the Brooklyn Horticultural Society, to have this matter cleared up; and we hope it can be done without implicating any body.

GAS FOR THE MILLION.—Heretofore the use of gas has been mainly confined to cities and the country residences of the wealthy. We have now an apparatus which will furnish a good light at a less cost than common oil. The light is pure and brilliant, and free from offensive smell. The apparatus is safe, simple, cheap, and the only cleanly one we have ever seen. We have studied it with much interest, and commend it especially to our friends in the country. M. P. Coons is the patentee; but it may be had of Butler, Hosford, & Co., 30 Broadway.

HARTFORD PROLIFIC GRAPE.—Much has been said of the dropping of the berries of this grape; but we have had specimens this season, from different parties, on which the fruit hung as well as on most other kinds. Mr. Fuller sent us a basket of the Prolific, which we found to be about equal to the Isabella in its best estate, and which has advanced our opinion of it somewhat.

SOME SIGHTS AT PHILADELPHIA.—While in Philadelphia attending the session of the Pomological Society, we received many courtesies from friends there, which call for our thanks; but to Mr. King we are especially under obligations for personal attentions, which we shall not soon forget. It was chiefly through his politeness that we were enabled to visit some very interesting places during our brief stay.

Having added Rev. Dr. Ide, Dr. Grant, and Mr. Campbell to our party, our first call was at the princely residence of James Dundas, Esq. We could only cast a hasty glance at the houses and the grounds, the latter admirably kept. It was a very gratifying sight to see such large grounds, and so many rare and costly plants, in the heart of the city. The great feature among the plants was the grand Victoria regia, leaves of which have since been exhibited at Brooklyn and New York. We found a young plant in a basin in the open air, which seemed to be growing finely, with a flower bud nearly expanded; but the large plant in the Victoria house was a sight of itself worth a journey to Philadelphia to see. In the same tank was a specimen of the rare and

remarkable Lace Plant, which grows entirely under water. The tank is arranged very much like that of Mr. Cope's at Taconey, which we saw several years ago. Our stay at Mr. Dundas's was necessarily very brief, but we could not help being struck with the many large and fine plants in his collection, and went away regretting that there should not be room enough for all, and that they were consequently so much crowded.

From Mr. Dundas's we went to Mr. Fahnestock's, a small but tidily kept place, with a very polite gardener. We found every thing in good order. The chief attraction is the Orchid house; it is a model of its kind, well stocked with choice and rare plants, all in the best condition. We do not remember to have seen any where so fine a collection of the exquisitely beautiful Anœctochilus. We left, regretting that we had only time for a glance at this fine collection of Orchids.

A ride through some of the principal streets, embracing a sight of several fine churches and public buildings, brought us to the water works, one of the most interesting objects in Philadelphia, but not strictly a horticultural subject, so we will take to our carriage again, and pass on to Girard College, another subject not strictly horticultural; but we may be permitted to say that Girard College is the grandest specimen of Grecian architecture that we have ever seen. The building is immense, but so exquisitely proportioned that we get no proper conception of its size until we stand beside one of the colossal columns that surround it. Nothing noteworthy occurred here, except that the D.D. of our party was excluded by the rules of the college, while the M.D. entered without let or hinderance. Not being disposed to find fault with so munificent a benefaction, we can only say that the rule struck us as being very singular.

Leaving the college, we proceeded to the old Bartram garden, which we had a great desire to see. We were disappointed, however, in finding a spirit of neglect pervading the whole place; but the grand old trees, the greenhouses in ruins, and the old ivy-mantled homestead with its quaint inscriptions, were full of a peculiar interest, and very impressive. We should have liked to linger for a while amid these mementoes of the past, but the day was far spent, and with only a brief look we left silently, each one absorbed in his own thoughts.

We returned to Philadelphia, having done a good day's work in the way of sight-seeing, and found Mr. King an excellent Mentor through it all, our only regret being that our visit at each point of interest was necessarily brief.

But we were not yet done. Having accepted some invitations at Germantown, and being desirous of examining Mr. Bright's system of planting and pruning, we increased our party the next morning, and took the early train. We were met at the dépôt by Dr. Houghton and Mr. Bright, and conveyed first to Dr. Houghton's new place. Some of us, no doubt, went prepared to criticize all we saw, and others in a state of bewildering uncertainty, having heard so many contradictory reports of what we should see. We first went through the grapery. This is one year old, and built on Mr. Bright's "inside border" principle, which he has heretofore fully described in these pages. As some misapprehension exists in regard to the concrete bottom, we will add here that the bottom of the border is elevated several inches above the bottom of the house, so that it is impossible for stagnant water to accumulate in it. The vines are young, but have made a fine growth of round, stout, shorted-jointed wood, and are all that could be desired. The vines in pots were in the same excellent condition, and gave us much satisfaction. On the whole, every thing seemed to be working here as well as Mr. Bright could desire; we should have no doubt of his success, with some modification of his ventilation, and some further precaution for moisture in his borders as his vines advance in age, all of which he will no doubt look after sharply.

We next examined the new vineyard. The vines are planted two feet apart, on the "single stem renewal system." They are one year old, have made a fine growth, and are in the best condition. Mr. Bright's system has provoked a good deal of discussion, which is all right and proper enough when confined to the merits of the system itself, which has not always been the

case. In the meantime, we bespeak for it a fair trial. Let Mr. B. go on with his experiment, as we judge he will in spite of all opposition; the horticultural community will be benefited whether he succeeds or fails. We would suggest to him, however, that his chief difficulties will begin when the vines have attained the age of some five or six years, when some additional "safety valves" will be needed, which he may find the means of supplying; and by that time he will have demonstrated how far, if at all, old wood is necessary to the highest condition of fruit; a very interesting and important point of great practical value. His system is so simple that we wish he may find all his anticipations realized. We shall watch his progress with much interest.

We next examined the young pear orchard, chiefly in reference to the manner in which the trees are planted. From what we had heard, we expected to find this orchard a multitude of hillocks; but we were disappointed. On removing the charcoal mulch (which, by the way, is a good one) the ground was found to be level, offering no impediment to the cultivator. The roots were some two to four inches from the surface, just where they ought to be. These trees were well planted, and none of the party, so far as we know, found fault with them in this respect, though some comments were made on the want of pruning, the benefits of which Mr. B., we believe, proposes to effect in his own way. The standard trees are alternated with dwarfs, and all are growing finely. The orchard is of considerable size, and will no doubt in time prove profitable.

After partaking of the doctor's hospitality and discussing some native vines, the party proceeded to Mr. Bright's nursery, where we found more graperies with inside borders, the vines being in very fine condition, and ripening off nicely. The vines in pots were also very fine. The party next walked over the grounds, and we were greatly pleased with its neatness, and the fine appearance of every thing it contained; it is a model in its way. The beautiful specimens of Firs, Junipers, and the lovely Golden Arbor Vitæ, were especially noteworthy. The trees and shrubs are not huddled together, as is too frequently the case, and they consequently rapidly attain size and form, give more satisfaction, and sell at a higher price.

Leaving Mr. Bright's, we made a brief call at the stately residence of Mr. Lovering, mainly to see his orchard house, an account of which we have already published by our correspondent, Dr. Norris. This orchard house is of large size, and has been built at some expense, and the owner has, no doubt, aimed to erect the best possible house for this purpose, and to conduct all the operations pertaining to it in such a way as to insure the best success. We admire the spirit and enthusiasm which lead a man into an enterprise of this kind, and therefore regret that we can not altogether approve of the arrangement of this house, and still more to be compelled to say, that in the management of his trees he has made a sad mistake from the beginning. We do not know whether Mr. Lovering is satisfied with the results thus far, but we know that he ought not to be. He has too many trees in the house by more than half, and they are not grown as they should be. We would on no account say a word of discouragement, and we hope he will begin again *de novo*.

Spending a few moments in walking over Mr. Lovering's beautiful grounds, we left with the intention of going to Mr. Smith's and Mr. Harrison's; but our time had fully expired, and so, thanking Dr. Houghton and Mr. Bright for their courtesy and attentions, we took the cars and returned to Philadelphia, well pleased with all we had seen.

We can not close without alluding to the reception given by Mr. James, on Wednesday evening, where we met most of the members of the society, and some of the leading citizens of Philadelphia. It was a time of much enjoyment, and passed off very happily.

PRESIDENT WILDER'S ADDRESS.—We give below the address of President Wilder, at the Eighth Session of the American Pomological Society, held at Philadelphia, Sept. 11–13, 1860. It is a valuable document, and will be read with much interest:

Gentlemen of the Society, and Friends of American Pomology:—By our Constitution, my

official position requires me, at the opening of this session, to address you on the art or science of pomology, on the interests, progress, and present condition of our association.

In the performance of this duty, I am happy to meet you in this city of brotherly love, the birthplace of that Declaration which gave us an indedendent national existence; of that Constitution also, which embodies the wisdom of our venerable fathers, and is the charter by which we hold the inheritance we seek to improve, enjoy, and transmit. Here, too, by a former inhabitant of Philadelphia,* a few years later, was first exhibited the application to vessels of that invisible agent, which now propels thousands of steamers through our navigable waters, which has wrought such wonders in all the useful arts of life, and is progressing upon a stupendous scale of development. Here was organized the first society for the promotion of American Agriculture. Here, also, originated the first association for the advancement of American Horticulture, having for one of its leading objects, the introduction and cultivation of new and choice varieties of fruit

Deceased Officers.—Andrew H. Ernst, of Cincinnati, Ohio, one of the Vice-Presidents of this society, died at his residence in that city, February 13th, 1860, aged sixty-four years. He was a gentleman of foreign birth, but thoroughly nationalized; being a great admirer of American character, and a firm supporter of American institutions. He was a pioneer and champion of our cause in the north-west section of our country; a gentleman favorably known and highly appreciated by all who knew him for his pomological knowledge, for his characteristic modesty, for suavity of manner, and for his eminent Christian virtues.

We have also to mourn the death of Benjamin V. French, of Dorchester, Massachusetts, a member of the Executive Committee, who died April 10th, 1860, aged sixty-eight years. Mr. French was ardently devoted to the cause of terra-culture, in its most comprehensive sense, and has, for many years, held important official positions in the Agricultural and Horticultural Societies of his State and country. Few men have been more interested in the cultivation of the soil, and few have been so strongly attached to rural life and rural happiness. Even to the close of life, these were his most cherished objects.

In reflecting on the usefulness and example of our departed friends, on their labors and contributions to the cause of pomology, their honorable life and peaceful death, we shall ever retain a high appreciation of their worth. We cheerfully accord to their memory our gratitude for their valuable services, and enrol their names among the benefactors of mankind. We mourn the loss of these worthy associates, but our institution still lives, and other friends survive to co-operate with us in advancing the cause so dear to our hearts.

Eighth Session.—This is the eighth session and twelfth year of our association. Much has been accomplished since its organization, but how wonderful the improvement in every branch of husbandry, and in all that concerns the progress of society since the formation, in this city, of the first association for the promotion of rural art, just three quarters of a century ago! It is profitable to look back occasionally, and see what has been achieved in the past.

Most sincerely do I congratulate you upon the general interest now awakened in fruit culture; on the zeal, enterprise, and industry of cultivators in the acquisition and production of new and choice varieties; on the multiplication of local associations and publications, all laboring with us for the promotion of pomology.

In this presence, and on this occasion, I have no speculations or doubtful theories to promulgate. We have had already enough, and perhaps too many of these for our own benefit or others. What we especially need are the results of the ripe and united experience of the best cultivators, guided by the deductions of science. Some of the recommendations in former addresses I desire to reënforce, for it is "line upon line, and precept upon precept" that makes a deep and lasting impression. New topics, as they arise, are entitled to respectful consideration, and the discussion of them will undoubtedly elicit important information.

Revision of Catalogue.—It has been our custom on former occasions to enlarge and revise our

* John Fitch, in 1788. To his steamboat Perseverance.

General Catalogue by a discussion and vote on each variety. Great advantages have already resulted to the country and the world from the catalogue of this Society, which classifies our fruits; registers those suited to general cultivation; those adapted to particular localities; those which promise well; and those that are pronounced unworthy of cultivation.

It will be remembered that, at the last biennial session, the Chairman of the General Fruit Committee recommended the appointment of local committees in each State and Territory, charged with the duty of producing and submitting to a special committee a list of the fruits cultivated in their respective localities.

From these local catalogues, embodying the ripest experience of the best cultivators in all parts of the country, it will be easy for the society, at its next session, to transfer fruits to the corresponding department of the Society's General Catalogue.

I therefore respectfully recommend,

First, That no revision of that portion of our catalogue embracing fruits for general cultivation be attempted at this meeting.

Secondly, That local committees be appointed, each of which shall be charged with the duty of preparing a catalogue of the fruits in its own locality, on the same general plan as the Society's Catalogue.

Thirdly, That a special committee be appointed at this time, to whom these various local committees shall make their report during the year 1861.

Fourthly, That the Special Committee be charged with the duty of compiling, from these local catalogues, and from the present catalogue of our Society, full lists of all the fruits therein named, properly classified and arranged, with due regard to nomenclature and terminology, and shall submit the same at the next biennial session for its consideratian and action. This labor, well performed, will redound to the honor of American Pomology.

These recommendations are not intended to preclude a discussion of the merits or demerits of any variety now on our catalogue. On the contrary, they call for a full and free expression of opinions in respect to any department of the same, as this may aid the labors of the several committees. Neither are they intended to preclude the addition of varieties to the list which *promise well*.

If this association had rendered no other service except to give to the world its present catalogue of fruits, it would have fulfilled an important mission: but it has done more; it has encouraged and originated many kindred associations, has brought together experienced cultivators, and made them teachers of each other.

By this action and reaction of mind on mind, many of the first principles of judicious cultivation are now fully settled and well understood. Among these are the following, to which I will now only briefly allude, as they have been more fully considered in former addresses:

1. *Culture of Trees.*—The healthful development of fruit-trees, as of other living substances, depends on the regular reception of a certain quantity of appropriate food. This food, whether derived from the earth, air, water, or other natural elements, is conveyed through the medium of the atmosphere and the soil. While we have only an indirect and imperfect control of the atmosphere and other meteorological agents, the Great Arbiter of Nature has committed the *soil* directly to our care and treatment.

2. To this I may add the general sentiment in favor of thorough and perfect drainage, beneficial to all cultivators, but indispensable to the fruit-grower.

3. Not less uniform is the experience of the salutary effects of a proper preparation of the soil for fruit-trees, both in the nursery and in the orchard.

These principles are settled in the minds of all intelligent fruit-growers; but they need to be often promulgated and enforced. It should be equally well understood that success depends upon the adaptation of the habits of the tree to the constituents of the soil, the location, and aspect or exposure. A disregard of this principle, and the fickleness of seasons, are among the most

common causes of failure, not only among inexperienced cultivators, but among professed pomologists.

More attention should be given not only to the location, but especially the aspect of trees. A common error is to disregard the time of ripening. We plant our early fruits in the warmest and most genial locations. These should be assigned to our latest varieties. For instance, we, at the north, have too often placed our late fall and winter pears, like Easter Beurré, or Beurré d'Aremberg, in northern aspects and exposed positions, where they are liable to injury by the gales and frosts of autumn, whereas we should have given them a southern aspect, and our most fertile soils, to bring them to perfection. The most favorable locations are not so indispensable to our summer fruits, which mature early under the more direct rays of the sun, and in a much higher temperature. This rule may require modification and even reversion to adapt it to the south or south-west portion of our country. And here I can not refrain from expressing the earnest hope that our local catalogues may be framed with a wise reference to this principle, and that the day may not be distant when the Society's Catalogue shall designate the particular locality, aspect, and soil, adapted to each variety of fruit.

But however important these considerations may be, the subsequent cultivation of trees must receive a passing notice, even at the risk of repeating some opinions of myself and others, which are already before the public.

The sentiments contained in the communication of Mr. J. J. Thomas, at our last session, against the growth of any other crop in orchards, especially against relying upon small circles dug around trees in grass ground, as a method of culture, deserves to be held in perpetual remembrance. Equally injurious, in my own opinion, is the habit of deep digging or plowing among fruit-trees, thereby cutting off the roots, and destroying the fibrous feeders, which frequently extend beyond the sweep of the branches. However necessary the practice may be of cutting off roots in old orchards, in the process of renovation, it should be carefully avoided in grounds properly prepared, and where the trees are in a healthy or bearing condition. From experiment and observation, I am persuaded that working the soil among fruit-trees, to the depth of more than three or four inches, should be carefully avoided. The surface should only be worked with a hoe, or scarifier, for the purpose of stirring the soil, and keeping out the weeds. Thus we avail ourselves of the advantages of what, in farming, is called flat-culture, at present so popular. For the same reason, manure should not be dug in to any considerable depth, and some of our wisest cultivators now recommend its application on the surface. So favorably impressed with this practice is the Massachusetts Board of Agriculture, that it has ordered a series of experiments with cereal grains and other products in the application of manures on the surface as compared with specified depths beneath it.

The practice of surface manuring is no novelty of our day. An eminent cultivator of fruits, nearly two hundred years ago, said, "Manures should be applied to fruit-trees in the autumn upon the surface, that the rains, snow, and frosts may convey the elements of fertility to the roots;" and "that, by this method, one load will do more good than two used in the common way of trenching in to the depth of one foot." Other distinguished cultivators and scientific gentlemen recommend the same practice. Hence we are of opinion that our orchards and gardens should be manured in the autumn, and on the surface, so that the manures may be thoroughly decomposed, made soluble during the fall and winter, and suitable for the nourishment of the tree early in the spring.

In the history of this art, as of most others, it is wonderful how human opinions change. What were once considered as fundamental, are now rejected as unphilosophical or injurious, and those once rejected are now adopted as wise maxims. The doctrine has prevailed, from the time of Columella and Varro, that manures should not be exposed to the air, but should be incorporated with the soil as soon as laid out; whereas, we have now the opinion of cultivators and chemists in favor of exposure to the air, and other external agents of decomposition, and

that it is not a source of nutrition to the plant until it is thoroughly decomposed. This opinion is certainly corroborated by the practice of skilful gardeners in all past time, who will never use green manure in the potting or cultivation of plants, and only that which has become old and fine.

New Native Fruits.—Changes of opinion have also taken place in regard to the acquisition of new sorts of fruits. Formerly we looked to other countries; now we rely, more especially, on our own seedlings for the best results. When we reflect upon the great number of new varieties which have, in our time, been raised from seed, and the progress which has thereby been made, no apology need be offered for repeating what has been said in former addresses, in commendation of this branch of pomology. It was my first, so it shall be my continual and last advice: "Plant the most mature and perfect seed of the most hardy, vigorous, and valuable varieties, and, as a shorter process, ensuring more certain and happy results, cross and hybridize your best fruits."

What wonders this art has already accomplished in the production of new and improved varieties in the vegetable kingdom! How much it has done for the potato, the turnip, and other vegetables, producing, from a parent stock of inferior grade, numberless varieties of great excellence! How it has brought forth from the hard, acrid, and foxy grape of the woods, the delicious varieties that are now obtaining notoriety and extension; from the bitter almond, the luscious peach and nectarine; from the austere button pear of the forest, the splendid varieties that command our admiration; from the sour crab, the magnificent apples which now constitute the dessert of our tables; from the wild raspberry and blackberry of the hedge, from the native strawberries of the pasture, those superb varieties which crown the table at our exhibitions. We believe it is now admitted, that our native varieties are more hardy, vigorous, productive, and free from disease than most foreign sorts. Thus, we have seedling gooseberries free from mildew, and pears that never crack. Why can we not breed out the black wart from the plum? It has been suggested, by a gentleman of great knowledge, that, by taking the common wild plum, the *Prunus Americana*, of which there are several varieties, varying in color, size, and flavor, we may produce kinds not subject to disease, if judiciously crossed with our best garden sorts; or, if bred between themselves, we might, perhaps, add new varieties to our species of cultivated plums, which would be healthy, productive, and delicious. This suggestion is certainly worthy of consideration and experiment.

Let not this recommendation, however, in regard to cross-fertilization, discourage the sowing of other seeds, because they have not been artificially impregnated by the hand of man, for they may have been fertilized by the wind, or insects conveying the pollen of one variety to the style of another. In this way have been produced most of the superior sorts of American fruits. How extensive and inviting is the field here opened even to the most common fruit-grower, who, practising upon this principle through a series of years, can hardly fail to produce some good fruits, although he may not be acquainted with the higher and more delicate process of artificial impregnation. But infinitely superior and more promising is the sphere of enterprise which opens before the scientific pomologist. It is broad as the earth, free as the air, rich as the land of promise. In his hands are placed the means of continual progress without the numerous uncertainties which must ever attend accidental fertilization. He has the sure guide of science, which never misleads her votaries, but elevates them from one degree of excellence to another towards absolute perfection. By these processes, new varieties are multiplying with unparalleled rapidity throughout our country. We rejoice in the intense zeal which has been awakened in this pursuit. It augurs well for the future, whether prompted by the desire either of fortune or of fame. But the spirit of adventure, thus awakened, needs occasionally a little wholesome discipline, lest it foster an undue reliance on immature experience, and tend to quackery, imposition, and fraud.

While we refrain from all personal reflections, we can not forbear exhorting all, and especi-

ally the officers and members of this association, to increased vigilance and caution in the recommendation of novelties, until they have been thoroughly tested by competent judges. As it is human to err, so it is natural to be partial to one's own offspring and friends, and this partiality often sways the judgment of honest and good men.

But a more common and serious difficulty under which we labor, is the promulgation of seedlings by individuals and associations that have not the information requisite to form an intelligent, and, therefore, reliable judgment. Another evil which increases with the mania for what is new and rare, is the exposure for sale, by flaming advertisements and speculating agents, of old varieties under new and specious names, varieties which, like Jonah's gourd, were known in their day and place, but have long been consigned to oblivion.

As in the past, so in the present and in the future, let it be our purpose and practice to reject those that are worthless, to withhold our approbation from those that are doubtful, and to encourage the multiplication of those only, which are of decided and acknowledged worth. Thus shall we elevate the standard of judgment, and fulfil the mission providentially assigned us. We might enlarge on this and other topics, but the brief period which it is proper for me to occupy in this opening address, restricts me to one or two other considerations.

Affinities.—I would here again recommend a more careful study of affinities between the stock and the graft. Whatever be the opinions in regard to the manner and degree of influence which the scion has upon the stock, or the reverse, the fact of that influence is undeniable. For example, we have seen certain varieties of the pear, as the Cross, Collins, and others, which would not readily assimilate with the stock, however vigorous. We have, in many instances, seen healthful trees sicken and eventually die, by the insertion of these uncongenial grafts. So great was the want of congeniality, that we have seen the stocks throw out successive crops of suckers, and although these were frequently removed, yet the scion would refuse to receive and elaborate the sap in sufficient quantity to nourish it, and the trees would finally die. In such instances, the only way to restore the health of the stock is to remove the graft for a scion of its own or some other appropriate sort.

As I have formerly directed your attention to this topic, I have only space to embody a few general rules to guide practice.

In deciding upon affinity between the tree and graft, consider—

First, The character of the woods to be united, as whether of fine or coarse texture, of slender or gross growth.

Second, The wood-buds, whether abundant or sparse, plump or lean, round or pointed.

Third, The seasons of maturity, whether early, medium, or late.

These suggestions will suffice to indicate the direction of thought and the kind of investigation to be pursued. A better knowledge of the subject will, no doubt, hereafter be attained, and will reveal some of the inexplicable mysteries which now attend this branch of fruit culture.

Grape Culture.—Let me for a moment call your attention to the cultivation of the grape. This is now assuming so much importance in our country, that it seems entitled to special attention at this time. Its progress is indeed marvellous. Until within a few years, it was supposed that Providence had assigned grape-culture and the manufacture of wine to countries in the south of Europe, and that the soil and climate of America were not at all adapted to their production. Still later, the theory was promulgated, which has not as yet yielded in full to a more enlightened judgment, that no good grape could flourish on our eastern slope. Now, it is known to succeed in almost every aspect where soil and cultivation are suitable, and it is believed, that no country on earth is better adapted to the extensive cultivation of the grape than the United States of America. This branch of fruit culture is yet in its incipient state, but it has progressed so far as to authorize the belief that the grape can be grown with success in almost every State and Territory of the Union.

With the progress already made in raising new sorts, it is only a question of time when we shall have varieties adapted to almost every locality. Thousands of cultivators, scattered over our extended country, are each of them raising new varieties from seed in the expectation of success. While some of them may be valuable, many must, of necessity, be failures, having been originated from natural and accidental impregnation, without any settled or philosophical plan. The laws of reproduction, in this department, are the same as in other branches of the vegetable kingdom. For instance, in northern latitudes, the great object should be to produce good kinds which ripen early, and are perfectly hardy. To procure these from the limited number of our native grapes, we must resort to the art of hybridization, taking for the parents those sorts which contain the characteristics we desire to combine. This work has already been commenced in good earnest, and is progressing rapidly in the hands of many practitioners. Illustrations have occurred under our own observation, proving the immediate and happy results from the crossing of native with foreign grapes. A gentleman in my own vicinity has taken, as the mother parent, the *Vitis labrusca*, a common native grape, and crossed these vines with the pollen of the Black Hamburgh and the White Chasselas grapes. Of forty-five seedlings, thirty-seven have borne fruit. All progeny of these have proved perfectly hardy, and have stood without protection for several winters, where the Isabella and Diana have been much injured. Of the seedlings produced from impregnation of the Black Hamburgh, most of them inherit, in a good degree, the color and characteristics of the male parent; while those fertilized with the White Chasselas, all were of a reddish color, intermediate between the natural colors of the parents. Thus we see the positive and powerful effect of the art of hybridization in the hands of scientific cultivators, who can, in a measure, control the process of reproduction, and render it subservient to their purpose.

But, to prevent discouragement and sustain perseverance, it should be remembered that, in conformity with the experience of Van Mons, Knight, and other pioneers, a seedling does not attain to perfection at once. To arrive at its culminating point of excellence, it must often be fruited for several years. Others maintain that a number of manipulations are requisite to bring a new variety to perfection. Some varieties attain this much earlier than others, and the same variety reaches it earlier or later in different localities. Hence, an originator should not reject a seedling of some apparent good qualities, simply because it may have some defect; for this may result from local or external influences. He should, therefore, cause it to be transferred for trial to a different soil and climate. Even grapes of acknowledged excellence are improved by this change. The Concord and Diana, of Massachusetts, valuable as they are at home, acquire a superiority in the south and south-west unknown in their original locality, even rivalling the Catawbas and Isabellas of those sections.

It seems to be a general law of nature, illustrated in our forests and fields, that some trees and grains will flourish in nearly all localities and latitudes, while others are particularly restricted to certain districts. By this arrangement an all-wise Providence diffuses blessings over our country and clime. Each has its appropriate share in the general munificence of the Creator, together with luxuries peculiarly its own. The grape is common and almost universal; but the varieties of this fruit are mutable and local, capable of endless adaptation by human skill. Hence this field for the culture of the grape, upon the borders of which we have scarcely entered, is, to the intelligent cultivator, full of promise and reward.

While it was formerly supposed that the peculiar, and, to many, the disagreeable aroma of our common grapes disqualified them for the production of choice fruits and wines, it has been proved, we think, beyond a reasonable doubt, that the characteristic designated, by way of contempt, as the fox or pole-cat flavor, will hereafter constitute one of the chief excellencies of of our new varieties, when, by the art of hybridization and civilization, this flavor shall have been modified and changed, by alliance with other grapes of excellence that are destitute of this quality. This flavor, thus improved, seems destined to form a distinctive characteristic

of an important class of American grapes, even to give them a marked superiority over such varieties as the Black Hamburgh, Sweet-water, and such other foreign sorts as are destitute of any special aroma, and consist mainly of sugar and water. It may yet make our seedlings rivals of the Muscats, the Frontignans, and other highly-flavored foreign grapes of the Old World. Multitudes of seedlings, deriving their origin from our native vines in various stages of civilization, and with a special view to this result, are now on probation in various parts of our country. From these must necessarily arise, in coming time, many sorts of superior quality.

What if the desire for new varieties has become a mania? What if it produce, here and there, personal sacrifices and disappointments? What if, from want of skill, or from adverse causes, many inferior or even worthless varieties are produced? The result is certain. The time fast approaches, when the ultimate good will be realized, and when America will become the great grape-growing and wine-producing country of the world.

I admit, in respect to all our fruits, that, as the number of varieties increases, more judicious and severe discrimination in the selection of very valuable, and in the rejection of comparatively inferior varieties will be demanded. This is the lesson which past progress teaches us. What would the gardener of fifty years ago have said, if he had been told that his favorite Bon Chretiens, Muscats, and Blanquets, were soon to be thrown into the shade forever? He would have shown as much incredulity as some of our modern amateurs do when we talk of future progress. The Duchesse d'Angoulême, the Beurré d'Anjou, Doyenné Boussock, Beurré Superfin, Bartlett, and Seckel, had not revealed to him the vast extent of improvement in fruits which was to be made. What was true, in this respect, fifty years ago, is equally applicable to present varieties. The impossible has no place in the history of progressive science, whether relating to natural arts, or to mechanical industry.

We have spoken here, and on former occasions, of the advancement which has been made in pomology in our age and country. This is to be ascribed in part to the great scheme of Providence which has developed such stupendous results in the march of civilization and all the arts of life. Human pursuits are allied by affinities so intimate, that a remarkable discovery or improvement in one advances them all. Never before has the public mind been so profoundly moved, nor the energies of mankind so concentrated upon efforts to relieve toil, to perfect skill, to reward labor, and to multiply the comforts and blessings of life.

Truly we live in an age of transition and wonder! The invention of to-day supersedes that of yesterday, and in its turn is to be supplanted by that of to-morrow. No enterprise, however bold, adventurous, or vast, whether the construction of a railroad from the Atlantic to the Pacific; the laying of the mystic wire in old ocean's bed, or threading it through Behring's Straits and winding it around the globe, is too great for the capital, energy, or intelligence of the present generation. * * *

The great industrial pursuit which this Society seeks to promote, furnishes testimony of progress not a whit behind the most favored of the arts.

Behold the improved methods of cultivation; the vast number of nurseries and orchards, springing up every where, as by enchantment; the novel processes of reproduction, multiplying plants in endless profusion, and as by the stroke of a magician's wand. Witness the interminable lists of varieties now in cultivation, increasing with each revolving year; the restless and anxious desire to obtain every thing new and promising, from whatever country or sea-girt isle it comes: the refined taste for choice fruits rapidly extending through every gradation of society; the standard of pomology, like the star of empire rising in the east, moving still onward to the west, and exciting the attention and astonishment of mankind.

But this progress results from no supernatural power. It is rather an illustration of human capability, acting in conformity with natural laws, and in harmony with the benevolent designs of the Great Husbandman for the amelioration of society, and the display of his infinite wisdom

and love, "sought out of those who take pleasure therein." It exhibits the conquests of mind over matter, the dominion of man over nature, improving, adorning, and elevating her to the highest and noblest purposes of her creation.

Inspired with these sentiments, let us take encouragement, and press on in the career of improvement, ever remembering that study and experience make the man; and that, for the highest attainment and the greatest success, we must depend upon the culture of the mind as well as of the soil.

"Survey the globe through every zone,
From Lima to Japan,
In lineaments of light 'tis shown
That CULTURE makes the man.
All that man has, had, hopes, can have,
Past, promised, or possessed,
Are fruits which CULTURE gives, or gave
At industry's behest."

FRUIT-GROWER'S SOCIETY OF WESTERN NEW YORK.

THE September Meeting of this Society was held at Rochester, on the 25th of September. We are greatly indebted to a friend for an excellent report of the proceedings, which we here give in a somewhat condensed form. The discussions seem to have been more direct than usually obtains on such occasions, and possess more than ordinary interest. The highest excellence was accorded to the Delaware, with great unanimity; but other good kinds were not overlooked. The report here follows.

The exhibition of fruit, which was very fine indeed, was made in conjunction with that of the Genesee Valley Horticultural Society, and attracted a great deal of attention, even from persons as conversant with excellent fruit culture as are the citizens of Rochester and the residents of its vicinity.

The display of grapes was finer than ever before made in Western New York, especially of Delaware, Diana, Concord, Rebecca, Hartford Prolific, &c., &c.; the comments upon which will be found in their place in the discussions herein reported.

After the usual formalities of organization, the morning session was opened with the discussion of the question of "The adaptation of standard or dwarf pears to different soils in our climate."

Col. HODGE, of Erie County, thought this question to be one of a great deal of importance, particularly to all pear cultivators. One great cause of the decided difference between cultivators in their success, is on account of the good or ill adaptation of the trees which they purchase to the soil on which they are to be planted. For instance, the owner of a fine farm with a very light, sandy or gravelly soil, sets out an orchard of pears or quinces, and the result is that he is probably unsuccessful in large profits.

Another farmer, with a stiffer mixture of clay with sand, or of a heavier, gravelly loam, neither too dry nor too wet, plants his orchard as dwarfs, and they succeed admirably.

At Buffalo the opinion prevails, that dwarf pear-trees upon a combination of clay and loam succeed admirably; and cultivators in Erie County have had full opportunity to test the results. The opinion also is, that standard pears succeed best upon deep, sandy soils, where the roots can penetrate deeply into the subsoil.

D. W. BEADLE, of Canada West, said, "We never fail, upon our soil, in growing good dwarf pears, although the soil is not as heavy as might seem to be necessary, from Col. Hodge's remarks. I never thought that ours was a soil which was clayey; we rather call it sandy. With us, we find that the Orange Quince bush really grows much finer, and produces better fruit, upon a somewhat clayey, heavy soil. The stock upon which pear-trees are budded, in order to dwarf them, is the Angers Quince, which is of a slightly different habit, not so much affected as the Orange Quince by differences in the composition of soils. The only real enemy which we

have in Canada to pear culture, either on standards or dwarfs, is the disease which we in our ignorance call the 'fire blight.'"

These remarks caused Col. Hodge to explain that, in his remarks as to sandy soils or clay soils, light or heavy, he spoke of the two extremes of soils. The soil at St. Catharine's is neither extreme—should call it a sandy loam, neither extremely wet nor extremely dry—and consequently was well adapted to the culture of either standards or dwarfs. Would say that the trees in Mr. Beadle's plantation are very fine, and the result in the growth of standards or in the growth of dwarfs is not much different. Would, however, repeat his meaning in the previous remarks, and that was, that the extremes of clayey and sandy soils differ in their adaptation to dwarf and standard pear-trees.

E. MOODY, of Niagara County, stated that upon his farm dwarfs did not, as a whole, succeed well. Most of the farm is a dry, gravelly soil; and standards succeed first-rate. Raises very fine Bartletts on standards, and excellent White Doyennés on standard. Beside the Ridge soil spoken of, Mr. Moody has some pretty stiff clay soil, of the character called a "retentive soil," upon which dwarfs do very well.

Has found that upon a heavy soil, the standards have a greater tendency to crack their fruit than the dwarfs had.

P. BARRY, of Monroe County, remarked that the dwarf pear must have a good deep, rich soil, and good cultivation, in order to succeed very well. It is certain that the standard will succeed (both as to growth and as to fruiting) in a soil where the dwarf will not; because the standard can be persuaded to grow upon a poorer, lighter soil. Would rather lay it down as a rule, that all pear-trees require a good soil and require good treatment. Mr. Barry's own trees of both descriptions are growing in a soil which, although quite light, is called by most persons a sandy loam; and has seen orchards doing equally well upon similar soil in other places. They did not have great enriching at any one time; but we give to them an annual manuring upon the surface, or a compost adapted to the nature of the soil, and lightly spaded in. On a small scale, the dwarf pear can be grown well upon any soil or in any locality; because if too sandy it can be mixed with loam or clay, and if too clayey the addition of sand will remedy the defect; but when we come to speak of the cultivation of pear-trees upon a large scale for profit, where these amendments can not easily be made to the quality of the soil, I would by no means advise the dwarf, or any other tree, to be planted upon a dry, light, gravelly, poor soil. As to dry, the soil must be dry any way—*that* is a requisite never to be omitted—but must be a dry, substantial loam, like what our farmers here call their best wheat soils.

It is difficult to classify soils; there are so many grades, and such imperceptible differences, which yet affect growth; but the skill and enterprise of cultivators of our various fruits, have overcome what would generally have been called impossibilities. Still, if any farmer have light, blowing sand upon one part of his premises, or wet, springy soil upon another, I would not plant any sort of pear-trees upon either of those soils.

As to which varieties of pear succeed best as dwarfs, much depends upon the selection of varieties. Every year confirms the opinion that Louise Bonne de Jersey is one of the very best sorts upon the quince. So, also, is Duchesse d'Angoulême. These two in particular will take the lead of all others. They bear good crops of fruit every year. They are long-lived, and grow thriftily, and are sure to bring in profit to the good cultivator. For permanent orchards, a society like this must always recommend such varieties as we know live to a good age and are profitable in good soils. If I were to add, I would say, Beurré Diel and Beurré d'Anjou.

H. N. LANGWORTHY, of Monroe County, could speak from experience as to the Louise Bonne, Bartlett, &c., upon a light sandy soil, among peach-trees. Had found that such land was too light, and that the trees did not grow well the first year; but that this year they grew well, some making a growth of over two feet, and perfected large, fine fruit, and a good crop of it too.

(To be continued.)

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(To be continued.)

CALADIUM ARGYRITES.

for THE HORTICULTURIST.

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